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AUTHOR	Moore, Mary T.; Fasciano, Nancy J.; Jacobson, Jon E.; Myers, David; Waldman, Zev
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ABSTRACT

This volume contains three reports -- the primary report which reviews the programs offered, students served, and operational issues facing Upward Bound projects -- and two supporting documents, "Grantee Survey Report" and "A Report on Upward Bound Target Schools." Upward Bound is a federally supported program providing supplemental instruction, counseling, and cultural enrichment to disadvantaged high school students. The program currently supports 568 projects and serves 41,000 students. Major findings of the study of Upward Bound project operations include: consistency characterizes Upward Bound grantees and their core operations; academics are a central focus of most Upward Bound projects; Upward Bound operations are primarily student-centered; unmet need and student demand for Upward Bound exceed the program's current capacity; and projects report high college-going rates yet exhibit low rates of student persistence. Three issues for policymakers are identified: (1) the need for improved measures of project performance and accountability; (2) the need for more pre-college services, and (3) the need for fostering projects' efforts to improve efficacy through experimentation. The second report presents results of a survey of 220 projects hosted by post-secondary institutions. The survey reviewed student and project characteristics, program goals and offerings, delivery methods, staffing, recruiting/admission, and outcomes. The third report analyzes data from a survey of about 700 Upward Bound target schools. (Each report contains references.)

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May 1997

The National Evaluation of Upward Bound

A 1990's View of Upward Bound: Programs Offered, Students Served, and Operational Issues

Background Reports:

Grantee Survey Report
Target School Report

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Prepared Under Contract by:
Mathematica Policy Research, Inc.
Washington, DC

Mary T. Moore, Principal Investigator

Background Reports:
Nancy J. Fasciano
Jon E. Jacobson
Mary T. Moore
David Myers
Zev Waldman

David Goodwin, Project Officer
Planning and Evaluation Service
U.S. Department of Education

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Three reports are included in this volume. The first report, "A 1990s View of Upward Bound," provides an overview of the programs offered, students served, and operational issues facing Upward Bound projects. This report draws on information presented in the two supporting documents, "Grantee Survey Report" and "A Report on Upward Bound Target Schools." There may be slight differences in results presented in the overview and the background reports. These differences are a consequence of re-analyses of the original data presented in the background reports.

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A 1990s VIEW OF UPWARD BOUND: PROGRAMS OFFERED, STUDENTS SERVED, AND OPERATIONAL ISSUES

Mary T. Moore

ACKNOWLEDGMENT

This overview of the Upward Bound program reflects the efforts of many individuals. David Goodwin in the Planning and Evaluation Service of the U.S. Department of Education provided important insights and guidance throughout all phases of this report and the reports on which this work builds. His patience and constant encouragement throughout this study have been very helpful. Others who carried much of the burden of analyzing the data reported here and providing initial interpretations of the results include Nancy Fasciano, Jon Jacobson, Zev Waldman, Allen Schirm, and David Myers. They describe many of their findings in three reports: (1) the Grantee Survey Report by Fasciano and Jacobson 1995, (2) A Report on Upward Bound Target Schools by Waldman et al. 1995, and (3) The Short-Term Impact of Upward Bound by Myers and Schirm 1996. Besides these individuals, Geri Mooney played a major role in developing the questionnaires used in the various surveys and Anne Ciemnecki and Edward Freeland oversaw much of the data collection in the field. Brad Chaney from Westat directed the collection of students' school transcripts and Beatriz Clewell from the Educational Testing Services directed the field visits. Darnecia Morris with assistance from Kathleen Donaldson produced and assembled the report.

All members of the study team wish to recognize the high levels of support received from the Upward Bound community, including the Upward Bound project directors, target school liaisons and school principals, and students who participated in each survey. Without their cooperation this study would not have been possible.

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EXECUTIVE SUMMARY

BACKGROUND AND PURPOSE

Despite increases in overall levels of college attendance, a considerable gap remains between the postsecondary participation and completion rates of disadvantaged students and those of their more advantaged peers. Upward Bound is one of the main components of the federal government's enduring commitment to reduce this gap. Since its creation as part of the nation's War on Poverty, Upward Bound's mission has been to help disadvantaged high school students--students whose parents have low-incomes or did not complete college--realize the dream of a college education through an intensive program of supplemental instruction, counseling, and cultural enrichment.

For 30 years, the federal government has awarded Upward Bound project grants to institutions of higher education (and a few community-based organizations and secondary schools). These projects are required to provide a multi-year program of weekly activities during the academic year and an intensive summer program that simulates the college experience. Eligible students must demonstrate that they require academic assistance to succeed in college. In 1995, the most recent year a new round of grants was made, the federal government awarded $164 million to 568 grantees. These grantees served 41,000 students enrolled in regular Upward Bound programs (that is, programs not specially funded to serve veterans or students interested in math and science).

This report synthesizes a broad array of information about Upward Bound's current operations.[1] The information was collected as part of a comprehensive national evaluation of the program sponsored by the Planning and Evaluation Service of the U.S. Department of Education, Office of the Under Secretary. The study's main objectives are to fully document the program's current operations and to assess the program's effectiveness. The federal government last sponsored a comprehensive evaluation of Upward Bound in the mid-1970s. Little new information has been available since then about program operations and effectiveness.[2] This report focuses on program operations; subsequent reports will address the program's overall effectiveness as students progress through high school and college.

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[1] The sources of data about program operations reported in this document included two nationally representative surveys of Upward Bound grantees and of their target schools. Additional data were obtained through field visits to a representative sample of 20 projects in spring/summer 1993. Student-level data were obtained from questionnaires administered to all students who applied to and were determined to be eligible for the program between 1992 and 1994 within a representative sample of 70 Upward Bound projects. The same students were interviewed in a follow-up telephone survey in the spring/summer of 1994. Detailed results from these individual data sources appear in Fasciano and Jacobson (1995), Waldman et al. (1995), and Myers and Schirm (1996).

[2] The previous evaluation was conducted by Research Triangle Institute (Burkheimer 1979). Although that evaluation confirmed that Upward Bound produced higher levels of educational attainment for participants, the matched-comparison research design did not rule out initial differences between the treatment and comparison groups of students as a source of the program's success. The recent evaluation uses a random-selection design to address this problem.

Environmental changes and the evolution of federal Upward Bound policies underscore the need for new information about program operations. The local environment in which Upward Bound projects operate has undergone noteworthy changes since the previous evaluation. A conservative estimate suggests that more than 800 federal and nonfederal precollege projects in addition to those supported by Upward Bound funds have been established since the 1980s to help disadvantaged youth reach and succeed at the postsecondary level. Moreover, a succession of reform movements aimed at improving student performance and the caliber of public education has altered the environment in which Upward Bound projects operate. Finally, since the 1970s, the postsecondary landscape has changed as two-year colleges have grown considerably in number and in student enrollment.

Federal policies governing Upward Bound also have changed since the 1970s. Federal program requirements have become more specific in many areas, and funding policies have placed a high priority on maintaining the continuity of projects and ensuring a consistent level of resources per student. Until recently, these priorities--in concert with relatively stable levels of funding (in terms of constant dollars)--made it difficult to substantially increase the number of new Upward Bound projects. How these policies have shaped the operation of local projects is an important question to address.

MAJOR FINDINGS ABOUT UPWARD BOUND PROJECT OPERATIONS

Consistency Characterizes Upward Bound Grantees and Their Core Operations

Consistency is a striking feature of Upward Bound projects. This consistency, which various federal policies have promoted, is evident in the continuity of projects. In 1993, for example, 75 percent of active Upward Bound projects had been operating for more than 10 years and half for more than 20 years. Consistency also is evident in the design of projects. Most projects rely on common structures and practices that result in a highly similar experience for participating students, regardless of the specific project they attend. For example, projects typically

- Enroll a higher fraction of low-income/first-generation-college students than the two-thirds required by law
- Start students in the early high school years and offer a bridge program that continues past graduation
- Provide a year-round schedule of services to students that encompasses three-quarters of the regular school year plus half (six weeks) of the traditional summer break

- Select the majority of participants from applicants with educational motivation, few behavioral or disciplinary problems, and grade-point-averages at the B or C level

- Rely on a largely well-educated staff (bachelor's degrees and higher), which serves as a source of role models for students because of similar racial or ethnic backgrounds

- Simulate the college experience through a summer residential program on campus and by basing some portion of academic-year activities on campus

- Provide a full menu of support services, including tutoring, counseling, planning for financial aid, career planning, cultural awareness programs, and stipends

- Place the highest priority on students' academic preparation (rather than on access to financial aid, personal skills development, or exposure to college)

Despite the striking consistency in Upward Bound's core operations, variations do exist. Projects differ by size, student-to-staff ratio, course content, requirements, specific selection and admission criteria, and method of instruction. Other variations include the provision of job assistance to students, opportunities for earning high school credits, relationships with target schools, and activities for involving parents. Thus, while Upward Bound students in different projects participate in very similar programs, they do not participate in identical programs. So far, analyses have failed to detect any short-term results attributable to these variations.[3] Whether these differences will yield different longer-term results is an important question for future reports.

A Rich and Challenging Academic Program is a Central Focus of Most Upward Bound Projects

The programs offered by the majority of Upward Bound projects today incorporate a heavy emphasis on academic preparation for college. Although the previous evaluation prompted concern that Upward Bound projects devoted inadequate time to academic instruction, recent evidence counters this view. Three indicators confirm the academic intensity of current projects:

- ***Number of Courses Offered.*** Fifty percent of Upward Bound projects offer more than 17 academic courses in the summer session and more than 10 academic courses during the regular school year. These courses are in addition to the tutoring, academic counseling, study skills, and SAT/ACT test preparation courses that almost all projects offer.

- ***Nature and Content of Courses.*** More than two-thirds of Upward Bound projects focus on instruction that is not remedial. These projects adopt either a support focus that parallels (or anticipates) the curricular content in the college preparatory program of the high schools or an enrichment focus that teaches content that is unlikely to be included in students' high school courses. Most projects offer courses reflective of a fairly traditional precollege preparatory curriculum even as they put forth a wide range of subjects for students to study.

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[3] There is one exception to this observation. The award of high school credit for Upward Bound courses was found, as expected, to significantly increase Upward Bound students' academic course credits after their first year in the program.

Course Requirements. Eighty percent of projects require students to complete at least six courses, and the majority of these prescribe the set of courses that must be taken. Projects that specify courses fall into two groups. One group, which represents one-third of all projects, emphasizes completing a "foundational" curriculum comprising reading, writing, algebra I and II, and geometry. A second group, which is slightly larger, pursues a math/science orientation that involves additional requirements for precalculus, calculus, and science courses.

Upward Bound Operations Are Primarily Student-Centered; Parent- and School-Centered Activities Are Secondary

Upward Bound activities focus on directly influencing students, not on changing the student's family or school. Parent involvement activities are offered widely by Upward Bound projects, but few activities are offered more frequently than once a year. In fact, projects divide into two camps with respect to their efforts to involve parents: most projects annually conduct a common set of one-time activities with parents (for example, sending and discussing written evaluations of student performance, holding workshops on financial aid, and making home visits), while a few projects provide more frequent and varied opportunities for parent involvement. Although staff resources and perceptions of parent disinterest can limit emphasis on parent involvement, focus groups indicate that parents actually want more opportunity for involvement.

Target schools' involvement with Upward Bound projects is similarly limited. While most projects and target schools have positive relationships, their interactions chiefly involve matters of recruiting and screening. Activities such as workshops for teachers and joint planning of curricula occur less frequently. Moreover, because projects work with an average of 10 target schools and 8 students per school, activities reported by most projects, such as hiring school faculty to be instructors and initiating communications related to specific students, ultimately involve only a limited number of target school staff members.

Unmet Need and Student Demand for Upward Bound Exceed the Program's Current Capacity

Even with the program's emphasis on academic instruction, the year-round demands on students' time, and the availability of other precollege programs, considerably more students are eligible for and apply to Upward Bound than can be served. Communities now unserved by Upward Bound represent the largest amount of unmet need. Although precise estimates of the percent of unserved students and schools in the nation are difficult to construct, it is possible to establish upper bounds. Less than 1 percent of all income-eligible youth in grades 8 to 12 were served by Upward Bound in 1992-1993.

Measured another way, Upward Bound served students in about 8 percent of the nation's schools with grade eight or above in 1992-1993. While these estimates tend to overstate unmet need, even if they were lowered by one-third, sizable unmet need would remain.

While smaller in magnitude, the unmet need in Upward Bound target schools is also substantial. This is the case even when project-specific eligibility requirements and demand (for example, students' willingness to apply, and services received from other precollege programs) are taken into account. Evidence from applications and target school contacts indicate that between two and five times as many students as enroll in Upward Bound are eligible and unserved by other precollege programs.

Projects Report High College-Going Rates Yet Exhibit Low Rates of Student Persistence

The average college enrollment rate reported by grantees is high. Among students in the program in the twelfth grade in spring 1993, 86 percent went on to enroll in college in the fall. This rate surpasses the 62 percent college enrollment rate obtained from data on all high school graduates for the same year and on low-income students with similar educational expectations who were surveyed in the National Education Longitudinal Study of 1988. Although impressive, the Upward Bound rate is based on a select group of students: those who chose to stay in the program through senior year. Evidence indicates that students with lower educational expectations are more likely to leave Upward Bound before this point.

A much larger share of Upward Bound graduates enter four-year colleges than two-year colleges: 66 percent versus 20 percent. Moreover, students are more likely to enroll in the type of college that hosts their Upward Bound program. Almost three-quarters of students from four-year projects enroll initially in four-year colleges, while only two-fifths of students from two-year schools enroll in a four-year school. It is unclear whether these patterns are the consequence of imprinting by the host institution, the basic inclinations of the students, or a combination of the two.

The college-going patterns of Upward Bound graduates reflect the Upward Bound experience only for students who stay in the program. A large percentage of students who enter Upward Bound, however, leave the program before their senior year. In fact, an estimated 37 percent of students who enroll, on average, leave the Upward Bound program within the first 12 months. This dropout rate is very likely to increase as students come to the end of their junior year, which projects report is the most vulnerable time for students who leave the program for jobs. All told, attrition from Upward Bound may be quite substantial by the time students finish high school.

CONCLUSIONS

Three conclusions emerge from this synthesis with respect to the questions of whether Upward Bound operations have changed since earlier studies, and whether projects are operating in ways likely to produce successful outcomes.

1. Amid Noteworthy Consistency, Two Changes Mark Upward Bound Operations: (1) An Increased Emphasis on Academic Instruction and (2) An Increased Representation of Projects Based at Two-Year Colleges

Twenty years ago, Upward Bound projects were described as remedial and short on instructional time. Projects today differ on these dimensions. They are not focused on remediation, choosing instead to support or enhance students' high school curriculum and to emphasize academic preparation as the program's most important objective. Several environmental factors have contributed to the academics-first thrust in Upward Bound. Among these are the increased pressure from the public for improved academic performance, the competitive pressure from other precollege programs, and recent changes in the Upward Bound legislation that by 1995 required projects to offer specific academic courses.

Since 1990, the representation of two-year colleges as Upward Bound hosts has increased. Two-year colleges operated only 8 percent of Upward Bound projects in the 1970s; a snapshot of 1995 grantees indicates this rate has climbed to 28 percent. The significance of this new mix of grantees is not altogether clear, but some differences can be expected. A larger percentage of students will not participate in a residential program in the summer, since projects hosted by two-year institutions are less likely to provide this experience. And at least one indicator of program success--the initial college enrollment patterns of program graduates--will change. A higher fraction of Upward Bound projects hosted by two-year colleges is likely to increase the fraction of program graduates initially enrolling in two-year colleges.

2. Measured Against Accepted Views of Effective Practice, Upward Bound Projects Have Considerable Potential for Effectiveness, But Attrition of Participants Impedes This Potential

Most Upward Bound projects offer programs that embody features considered effective for disadvantaged students. Most projects operate so as to increase the amount of instruction that students receive. The large majority of projects minimize remedial work and emphasize instruction that challenges students as it affirms their strengths and helps them develop high expectations. Almost all projects continue to complement academic course work with supportive services that include personal and academic counseling, cultural activities, and opportunities to explore careers and colleges. Moreover, these programs have clear appeal to a sizable pool of students who seek admission to Upward Bound.

The program's dropout rate, however, impedes the program's potential effectiveness. An important area for staff attention is devising programmatic strategies that more effectively contend with work pressures on teenagers and allow entrants to achieve the benefits associated with sustained involvement in Upward Bound.

3. Some Practices Show Promise for Enhancing the Effectiveness of Upward Bound Projects But Require Further Study

Several features arguably could increase Upward Bound's potential effectiveness. These include increased collaboration with target high schools, more frequent and focused opportunities for parent involvement, accommodations for working students, and transition services for participants entering college. Future reports from the national evaluation will shed some light on the longer-term effectiveness of these approaches, at least as they currently are used by some projects. Future reports also will assess the effects of several other variations among projects--for example, the academic focus, size, course requirements, student-to-staff ratios, and awarding of high school credits.

The forthcoming evaluation reports will be limited to analyses of approaches that projects have put in place. However, a number of strategies are rarely used--for example, transition services for those entering college and target school partnerships focused on teachers' professional development. The exploration of the potential contribution of these and other approaches for Upward Bound will require focusing beyond current operations.

ISSUES FOR POLICYMAKERS

Three issues emerge from this assessment of Upward Bound operations that require policymakers' attention.

1. Instituting Improved Measures of Project Performance and Accountability

The annual performance data that projects submit to the Department of Education should be revised to focus on potential problem areas. Specifically, measures of attrition should focus on students who leave Upward Bound over the full course of the program instead of focusing just on students who do not return from the prior year. Also, postsecondary enrollment measures should reflect students who have been long-term recipients of Upward Bound services, not just those who stay in the program through their senior year. Revising measures to address these concerns will require instituting safeguards to keep projects from excluding students who are likely to lower overall performance scores. For example, projects may turn away students with low educational expectations, given these students' higher likelihood of dropping out.

2. Addressing the Unmet Need for Precollege Services

A major issue facing Upward Bound is how to accommodate the fairly large pool of students who meet the program's eligibility criteria but do not receive any precollege assistance. On one level, this issue involves questions about whether to use increases in funding to initiate new projects in unserved communities (the course followed by the program in recent years), or to increase the number of students served by existing projects, or both. The influence of size on projects' effectiveness will be a key factor in answering these questions.

On a second level, addressing the unmet need raises the question of whether alternative configurations of Upward Bound services can achieve similar results at a lower average per-student cost. Currently, Upward Bound's average per-student cost is approximately $4,000 annually. Expanding services to a large number of students would be difficult at this level of investment. Experimenting with alternative configurations of services may provide an answer in the future about whether it is possible to achieve greater efficiency in Upward Bound programs.

3. Fostering Projects' Efforts to Improve Efficacy Through Experimentation

Although the federal policies promoting consistency among Upward Bound projects contribute to stable and predictable delivery of services, they also engender a conservative disposition among project staff with respect to innovation and change. In fact, few incentives exist at the federal level to stimulate the kind of self-reflection and experimentation among projects that are key components of organizational renewal, program improvement, and optimum efficiency. Consequently, projects tend to make only marginal modifications to their operations.

Upward Bound may be at a stage of maturity where funds could be productively invested in having some projects experiment with ambitious approaches to improve the program's effectiveness. This experimentation should be carefully planned and incorporate advice from stakeholders and a provision for proper evaluation and dissemination of results.

I. BACKGROUND AND PURPOSE

College enrollment and completion are major challenges for many students from low-income homes and communities. For 30 years, the federal Upward Bound program has funded institutions of higher education and other qualified organizations to operate programs that improve the likelihood that disadvantaged high school students will graduate from high school, enter college, and finish their degrees. The U.S. Department of Education (ED) in fiscal year 1995 distributed a total of $191 million in grants to 674 Upward Bound projects. Of this total, $164 million went to 568 grants that offered the main program of precollege services that is known as "regular Upward Bound."[1] The operations of regular Upward Bound projects and the services these projects provide each year to approximately 41,000 students are the focus of this report.

Originally created as part of the nation's War on Poverty in 1965, Upward Bound has conceptual underpinnings that have remained largely intact since its inception. The underlying strategy is to select a group of economically disadvantaged high school students with academic need and engage them in a comprehensive, multi-year program of academic assistance, counseling, and cultural enrichment that supplements their regular school program before they enter college. In addition, simulating the college experience, ideally through a residential summer program at a postsecondary institution, has been regarded as one of Upward Bound's key features. Generally, the program is targeted to students beginning in the high school years and continuing until they enter college.

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[1] The distinction, "regular Upward Bound programs," refers to grants for services directed at students in high school. Not included as part of regular Upward Bound are Upward Bound grants for special math-science programs to prepare students for postsecondary studies in these disciplines and grants for special services for veterans. The FY1995 distribution of funds among the regular, math-science, and veterans programs is 86, 10, and 4 percent, respectively. Thirty-two grants were awarded in FY1995 to veterans projects and 75 to math-science projects. The math-science and veterans Upward Bound grants are not included in the ongoing evaluation of Upward Bound from which findings in this paper are drawn.

This report is based on several sources of data that were developed as part of an ongoing national evaluation of Upward Bound. Under contract to the Planning and Evaluation Service in ED, Mathematica Policy Research, Inc. (MPR) is conducting a comprehensive five-year evaluation of Upward Bound that will update information about program operations and assess Upward Bound's impact on students through an experimental evaluation design. Most of the data sources used in this report are products of that part of the evaluation that focused on program implementation. These sources include a nationally representative survey of Upward Bound grantees that was conducted in spring 1993 (referred to as the Grantee Survey), a survey of the schools associated with Upward Bound as target or feeder schools that was fielded in 1993 and 1994 (referred to as the Target School Survey), field visits to 20 Upward Bound projects that took place in 1993, and a baseline and follow-up survey of all students who between late 1992 and early 1994 applied to the program and were judged as meeting the eligibility criteria of a representative sample of 67 Upward Bound projects.[2] In addition, this report draws upon information from previous evaluations and from the office within ED that administers postsecondary education and the TRIO programs.[3]

The components of the ongoing MPR evaluation that have addressed the implementation of Upward Bound programs were designed to produce descriptive information in order to address a range of questions. What types of institutions are the key players in Upward Bound's delivery of services? What are the main activities and services currently provided by Upward Bound grantees? How do

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[2] Detailed findings from these components of the evaluation are reported in Fasciano and Jacobson (1995) and Waldman et al. (1995). The student sample for the baseline survey constitutes a cohort of students who are being tracked longitudinally as treatment and control groups in the student impacts component of the MPR evaluation.

[3] TRIO refers to six federal grant programs, including Upward Bound, that are authorized by Congress under the Higher Education Act's provisions for Special Programs for Disadvantaged Students. The other TRIO programs and the years in which they started are Talent Search, 1966; Student Support Services, 1970; Educational Opportunity Centers (EOC), 1974; Staff Training, 1978, and McNair Post-Baccalaureate Achievement, 1989.

Upward Bound grantees work with and coordinate services with students' regular high school programs? To what extent are projects reaching students in need of assistance? To what extent are eligible students seeking to participate in Upward Bound? What do grantees report about Upward Bound's performance as measured by participants' rates of college enrollment? Detailed information pertinent to these questions appears in two reports: "The Grantee Survey Report," authored by Fasciano and Jacobson (1995), and "A Report on Upward Bound Target Schools," prepared by Waldman et al. (1995). This report serves a related, but different, purpose from these previous reports. While it restates key findings from the earlier reports, its main intent is to construct an integrated picture of how Upward Bound programs operate and to interpret that picture in light of two over-arching questions. First, how have program operations changed since the last broad picture of Upward Bound was taken? Second, to what extent do Upward Bound projects today offer programs and services that according to current understanding are likely to lead to successful postsecondary entry and attainment for educationally disadvantaged youth?

Five themes have emerged from investigations into the recent operations of Upward Bound projects. In effect, these five themes serve as umbrellas under which more detailed findings about how Upward Bound projects are organized and deliver services can be discussed. Each theme, listed below, frames a chapter in this report.

- Consistency among grantees and core operations of Upward Bound projects is a dominant characteristic of the program.
- A rich and challenging academic program is the central focus of service delivery in the large majority of Upward Bound projects.
- Projects are student-centered, emphasizing working directly with Upward Bound students rather than influencing their homes or target schools.
- There is considerable unmet demand for Upward Bound services, despite the presence of other precollege programs, a heightened focus on academics within Upward Bound, and project-imposed restrictions on eligibility.

- Projects' reports of performance show high college enrollment rates for the program's graduates, but a large percentage of entrants leave Upward Bound well before this point.

Before presenting the detailed findings associated with each of these themes, it is important to review why an up-to-date picture of Upward Bound projects is necessary and what considerations are pertinent to this picture.

II. THE NEED FOR CURRENT INFORMATION ABOUT PROGRAM OPERATIONS

The issues that inspired the creation of Upward Bound are as relevant today as they were three decades ago. Upward Bound continues to complement federal financial aid provided to students from disadvantaged backgrounds. As such, it represents a much smaller, but still important, part of a long-term national effort to help disadvantaged students pursue and complete a postsecondary education. The need for this effort has not disappeared despite some improvement over time in the high school graduation and college enrollment rates of youth from low-income homes. Put simply, while a higher percentage of students from low-income homes now graduate from high school and enroll in college, a significant gap still separates the rates of college enrollment for disadvantaged students and those for students from more economically privileged homes ("The Condition of Education" 1995). In fact, with respect to four-year college completion rates, some research indicates that the difference between economically disadvantaged students and their more privileged peers actually became greater over the past decade (Mortenson and Wu 1995). A few specific comparisons illustrate the multifaceted nature of this difference.

- In 1993, the percentage of high school graduates enrolling in college who were from families in the bottom fifth of the income distribution was almost 30 points behind the percentage from families in the top fifth.

- Indicators of preparation for college show that low socioeconomic-status (SES) tenth graders are much less likely to have completed geometry, for example, than their high-SES schoolmates--27 percent versus 68 percent (Ingels, Plank, and Wu 1994).

- Low-income families have been particularly hard hit by the rising cost of a college degree. Between 1979 and 1990, the share of annual family income that was necessary for families at the 25th income percentile to cover tuition, room, and board at a public college rose from 16 to 23 percent. For such a family to cover these costs at a private college, the share rose from 37 to 62 percent ("The Condition of Education" 1992).[1]

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[1] It is important to note that these estimates do not account for students' receipt of financial aid.

The preceding differences in the educational experiences of disadvantaged students underscore the sizable task that still challenges policymakers and educational leaders. To ensure that strategies used to accomplish this task are producing desired outcomes, it is essential to investigate each strategy's processes and effectiveness. The Upward Bound program is being assessed in this way through the large-scale, five-year evaluation reviewed in Chapter I. An important initial phase of this evaluation focused on how projects operate and deliver programs of precollege assistance.[2]

Three considerations have been key to developing a policy-relevant picture of how Upward Bound currently operates:

- Issues raised in the prior evaluation of Upward Bound's effectiveness
- Changes in the environment surrounding Upward Bound
- The evolution of the federal policy framework governing Upward Bound

A. ISSUES RAISED IN THE PRIOR EVALUATION OF UPWARD BOUND'S EFFECTIVENESS

There has been no comprehensive picture of how Upward Bound projects carry out their mission since the extensive evaluation of the program conducted by Research Triangle Institute (RTI) between 1973 and 1978. The RTI study uncovered important issues in several areas of program operations (Burkheimer et al. 1979). These areas involved projects' policies for recruitment and selection, students' sustained participation in Upward Bound, the academic instruction provided to participating students, and the continuation of assistance to help students make the transition into college. A brief review of the RTI evaluation findings in each of these areas is useful as context for the more recent information presented in this report.

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[2] The findings in this paper are highly important to the component of the evaluation that focuses on projects' impacts on students. The assessment of impacts necessarily involves a longer time frame during which students progress through high school and beyond. Future reports from the national evaluation will present findings on the program impacts and will examine how program operations and services are connected with such outcomes as participating students' improved academic skills, receipt of financial assistance, and college persistence. In the absence of these reports, however, readers should avoid drawing conclusions about the effectiveness of any specific feature or combination of practices.

The motivation of Upward Bound entrants and their sustained involvement in the program were key issues in the findings that emerged from the RTI study. While the study showed the program to be effective in raising Upward Bound students' college aspirations and rates of postsecondary enrollment, it also found that Upward Bound students as a group were more highly motivated initially than students with similar disadvantaged backgrounds. This finding raised a recurrent issue in Upward Bound's history: which students should be selected into the program as most in need of academic assistance. The concern is that projects, by serving students with higher initial levels of motivation or even achievement, might be focusing on students who were already more likely to go on to college and thus might have less need of, or derive less benefit from, the program's help.[3] With regard to the experiences of students who did participate in Upward Bound, the RTI study found that students who remained in the program for a sustained period benefitted more in terms of their postsecondary education than those with more erratic patterns of participation. Accordingly, a broad consensus developed that multi-year participation in Upward Bound was important to maximizing the program's influence and increasing students' rates of college enrollment.

The nature and amount of instruction provided by Upward Bound also emerged as important topics. While RTI researchers found little uniformity in how projects actually delivered instruction or other services, the study portrayed instruction in Upward Bound projects as largely remedial in nature. More recently, a growing body of research has challenged remediation as an effective instructional approach for students from disadvantaged backgrounds. Critics of the remedial model point to its tendency to lower students' performance expectations and to dwell on only a small portion of the skills that contribute to cognitive development and academic performance (Resnick 1987, Means and Knapp, eds. 1991, Steele 1992, Hopfenberg 1993).

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[3] The assertion that students entering Upward Bound would embark on and complete college without the program's assistance, however, has not been empirically proven. In fact, the RTI study found Upward Bound increased the overall educational attainment of participants compared to nonparticipants. The RTI study, however, used a design based on matched comparison groups and statistical models to assess the program's effects. These techniques cannot account for all relevant differences between students who are chosen to participate in Upward Bound and those who are not. This failing is a central reason for the current evaluation's use of an experimental evaluation design, which ensures that students with the same personal and demographic characteristics are studied over time as an Upward Bound treatment group and a group of controls who did not participate in Upward Bound.

The issue of how much supplemental instruction Upward Bound students received from the program also was touched upon in the RTI study. The authors of the study noted that since project staff could devote only limited time to academic instruction, it was unrealistic to expect that projects would have a positive impact on participating students' grade point averages, scores on standardized tests, and other measures of academic achievement. Other researchers later used the issue of the minimal amount of time devoted to academic instruction to explain why Upward Bound students' persistence once in postsecondary school was no different from that of similarly disadvantaged students who also enrolled in college (Natriello, McDill, and Pallas 1990). The RTI reports, however, contained no specific call to increase instruction for Upward Bound students in order to improve participants' college persistence and completion rates. Instead, the evaluators recommended that projects provide transitional help to sustain students through the early college years.[4]

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[4] The RTI researchers attached an important caveat to their finding that Upward Bound did not increase participating students' postsecondary persistence and degree completion, as compared to a group of "similar" students from disadvantaged backgrounds who enrolled in college. This comparison group, however, had already shown they were "survivors" by virtue of their enrollment in college without the help provided by Upward Bound. Looking at educational attainment and college completion using the original comparison group, which includes students who did not go on to college, RTI researchers indicated that Upward Bound had given participants long-term gains.

B. CHANGES IN THE ENVIRONMENT SURROUNDING UPWARD BOUND

A second condition both influencing Upward Bound projects and affecting the picture of how they operate is the changed environment that now surrounds the program. This change is largely the result of two significant developments that have occurred over the past two decades. First, a noteworthy number of precollege programs have been instituted in addition to Upward Bound since the late 1970s. Second, the secondary schools attended by Upward Bound students have been the target of one of the longest running periods of educational reform that the nation has experienced. Many of the reforms of the past 15 years have sought to foster instructional changes throughout school systems and to hold schools accountable for improving disadvantaged students' achievement and post-high-school outcomes. Each of these developments is briefly discussed below.

1. The Increase in Alternative Precollege Programs

The increased prevalence of alternative precollege programs has changed the landscape around the Upward Bound program. While some precollege efforts have existed as long as or longer than Upward Bound, the majority are of relatively recent vintage. Wilbur and Lambert (1991) note that "the mid-1980s marked the beginning of a period of rapid growth" for school-college partnerships. Although it is difficult to specify precisely how many alternative precollege "programs" currently exist, it is possible to roughly estimate the number of postsecondary institutions that report having precollege projects and the number of tuition-guarantee programs such as I-Have-A-Dream known to be in existence. A conservative estimate suggests that well over 500 nonfederally funded precollege projects have been established expressly to help disadvantaged secondary school students pursue a college education.[5] The magnitude of this number can be grasped by noting that it is almost equivalent to the number of regular Upward Bound grants that ED awarded in the 1995 grants cycle. Precollege projects funded by federal sources other than Upward Bound also have increased in number. For example, if the estimate of precollege projects that serve a purpose similar to Upward Bound were to include the federally sponsored Talent Search grants, the total number would increase to around 800 alternative precollege projects.

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[5] This estimate is calculated from data obtained through a nationwide survey of precollege programs at postsecondary institutions conducted by the National Center for Education Statistics (Chaney et al. 1996), and from information assembled by Wilbur and Lambert (1991). The former (continued...)

Of course, many precollege projects differ dramatically from Upward Bound in terms of underlying concept, the types of services they deliver, and size. Talent Search, for instance, is much less intensive than Upward Bound in terms of students' time and is targeted to a younger group of students.[6] The lower intensity of services is reflected in the resources per student. In contrast to Upward Bound's 1993 average federal funding of $3,600 per student (in nominal dollars), Talent Search's per student funding for that year equaled $231. Talent Search projects served an average of 963 students in contrast to the 85 served by Upward Bound projects.[7] Similarly, many of the nonfederal precollege projects represent a wide range of strategies. These strategies include adopt-a-school and other partnerships between postsecondary and secondary schools as well as I-Have-A-

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[5](...continued)
report found that one-third of the approximately 3,500 two-year and four-year institutions in 1994 offered such precollege programs, but this fraction includes institutions that reported hosting an Upward Bound program and other federally funded programs.

[6] Talent Search serves disadvantaged students who have completed five years of elementary education or are between the ages of 11 and 27. Since 1989 the program's regulations have placed priority on directing more services to seventh and eighth grade students.

[7] Talent Search services encompass personal and academic counseling, career exploration, and assistance in financial planning and applying to postsecondary schools. The program attempts to encourage disadvantaged students to pursue postsecondary education and to assist them in reaching that goal. Students cannot participate in Upward Bound and Talent Search at the same time. Consequently, Talent Search can be a pre-Upward Bound program for younger students, serve students in schools not reached by Upward Bound, or serve students who do not require or want to participate in the intensive program provided by Upward Bound.

Dream projects that guarantee tuition assistance and provide various support services to a class of students as they progress through grades K-12.

The availability and range of alternative precollege projects have important implications for investigating current Upward Bound operations. From one perspective, it is important to determine how Upward Bound services compare with those provided by other programs and the unique contribution Upward Bound makes. From another perspective, it is critical to examine both the extent to which Upward Bound projects and other precollege efforts co-exist in the same schools. More specifically, it is important to examine how the increase in precollege programs affects such areas as recruitment, targeting, participation levels, and the mix of services provided in Upward Bound projects.

2. The Influence of Educational Reform on Target High Schools

The various reform movements that have enveloped the public educational system since the 1980s have sought to change the regular educational program that Upward Bound projects supplement. The various manifestations of school reform--for example, increased academic requirements for graduation, adoption of new approaches to teaching and organizing schools and classrooms, and the introduction of alternative approaches for assessing student performance--are linked by two common objectives: (1) raising expectations and standards for student performance, particularly in the more traditional academic subjects and (2) realizing improved education-related outcomes for all students.

Upward Bound was originally seen as a compensatory program that provided the college preparation that schools in many disadvantaged communities did not offer. The reforms that have recently dominated the agenda of many school districts have increased the likelihood that high schools targeted by Upward Bound deliver regular education programs that prepare most students for some type of postsecondary educational experience. Although the extent to which reforms have strengthened the academic quality of regular education programs undoubtedly varies across schools and communities, evidence confirms that disadvantaged as well as advantaged students now take more academic courses ("The Condition of Education" 1994).

At the very least, the waves of educational reform have altered the climate in which Upward Bound projects and schools collaborate. And, in some cases, these reforms may have altered disadvantaged students' experiences in the regular education program and spawned collateral changes in Upward Bound operations and services.

C. THE EVOLUTION OF THE FEDERAL POLICY FRAMEWORK GOVERNING UPWARD BOUND

The changing nature of the federal policy framework governing Upward Bound represents a third consideration important to project operations. A program's policy framework is the formal network of legislation, regulations, procedures, and funding policies that define both the program and the set of informal assumptions and expectations held by those associated with the program. A program's policy framework evolves over time as nationally elected leaders initiate new thrusts in policy and as program administrators adjust the rules, procedures, and funding to reflect these thrusts. Over the past two decades the policy framework governing Upward Bound has evolved in two distinct directions: (1) toward greater specificity in the requirements governing whom projects serve and what they do and (2) toward a dual emphasis on preserving continuity among previously funded projects and constancy in the amount of per student funding.

1. Increased Specificity in the Federal Requirements Governing Upward Bound

The highly specific framework of legislation and regulations that now governs Upward Bound is the product of deliberations from a succession of reauthorization and regulatory cycles spanning

30 years. These deliberations have honed the general Upward Bound strategy of the 1960s into a basic blueprint for all projects. The specificity of Upward Bound requirements stands in marked contrast to the large degree of discretion that some federal programs give to local grantees in order to stimulate diverse approaches to service delivery. Instead, Upward Bound strives to institutionalize a fairly uniform model of services at diverse locations across the nation. In the last reauthorization of Upward Bound, representatives in the House articulated Upward Bound's distinctiveness by underscoring that it was not an experimental or a demonstration program. Rather, Congress intended it to be an ongoing program of precollege assistance and support that disadvantaged students and communities could come to rely upon (U.S. House of Representatives, Committee on Education and Labor 1992).

Student eligibility and targeting are areas that illustrate how Upward Bound policies have evolved in specificity. The federal Upward Bound rules state that students, in addition to being citizens or permanent residents, should have completed the eighth grade, must come from economically disadvantaged homes, and must need academic support in order to successfully pursue a college education. Furthermore, since the early 1980s, federal policy has promoted the sustained involvement of students by directing projects to admit students before their senior year in high school. Federal policy additionally requires that two-thirds of students in every project must be disadvantaged both by virtue of being low-income and having parents who did not complete college. The remaining one-third of students must qualify either as low-income or "first-generation college."

Throughout the early years of the program, administrators struggled to define the dimensions of Upward Bound eligibility. By the early 1980s, low-income, which at one time was often subjectively determined by local directors, was clearly specified as 150 percent of the official poverty level set by the Bureau of the Census. Similarly, federal officials created the criterion of first-generation college to replace a variety of need factors that were subject to different interpretations and often a source of controversy. Of the Upward Bound eligibility criteria--having completed the eighth grade, having a disadvantaged home background, and exhibiting academic need--only the definition of academic need still remains totally within the discretion of each Upward Bound project.

The federal framework has also become more specific in terms of project size, schedule, and services.[8] For some time, Upward Bound projects have been limited to serving between 50 and 150 students each year. The minimum schedule at each project must include a six-week summer session that provides for daily services and an academic-year program that entails weekly services. Until very recently, projects had the option of offering a range of services including instruction, personal and academic counseling, tutoring, financial counseling, residential programs, and cultural events. Beginning with the 1995 grants, however, projects must offer a core set of academic subjects as part of the range of services and courses they provide. Congress has defined this core as "courses in mathematics through precalculus, laboratory science, foreign language, composition, and literature."

2. Federal Priorities on Preserving Projects' Continuity and Constancy in Per Student Funding

Since 1980, Congress has given high priority to the continuation of previously funded Upward Bound projects. This response was both the government's answer to concerns that projects might be unfairly treated in the competitive grants process and a reflection of the belief that grantees should use the previous federal funding as a base from which to improve and extend their programs. Congress therefore mandated that incumbent grantees were eligible to receive a set of extra "priority points" based on reviewers' determinations of how successfully projects have met program objectives and federal administrative requirements.[9] Because of this policy, only a small fraction of projects (well below 10 percent) have failed to be refunded in each cycle.

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[8] When considering applications for grants, the Secretary of Education is allowed to waive specific requirements related to size, grade levels served, and schedule if projects can justify the importance of these adjustments to the overall effectiveness of the Upward Bound program. The existence of a small number of projects that admit students prior to the completion of eighth grade and that operate with enrollments beyond the specified range suggests some use of this discretion.

The priority on preserving continuity in grantees has coincided with giving priority to preserving a fairly constant amount of funding per student. By holding per student funding at a relatively stable level, federal program leaders sought to stem pressures on projects to expand enrollments, thereby ensuring that Upward Bound continued as a sustained, intensive program of services for participating students. The noteworthy constancy of Upward Bound funding per student since 1978, which is depicted in Figure II.1, is a reflection of this policy. Since 1978, the level of funding per student has ranged between $2,600 and $3,600 in constant 1993 dollars.[10] The pattern of constancy over recent years reverses the trend in the program's first decade when the number of students grew as total funding levels (adjusted for inflation) declined, thus causing levels of funding per student to fall. The emphasis on stability in per student support is also evident in a comparison of per student funding with other fiscal measures during the 20 years between 1973 and 1993. Per student funding grew by a full 58 percent between 1973, when per student levels of support had almost reached their nadir, and 1993.

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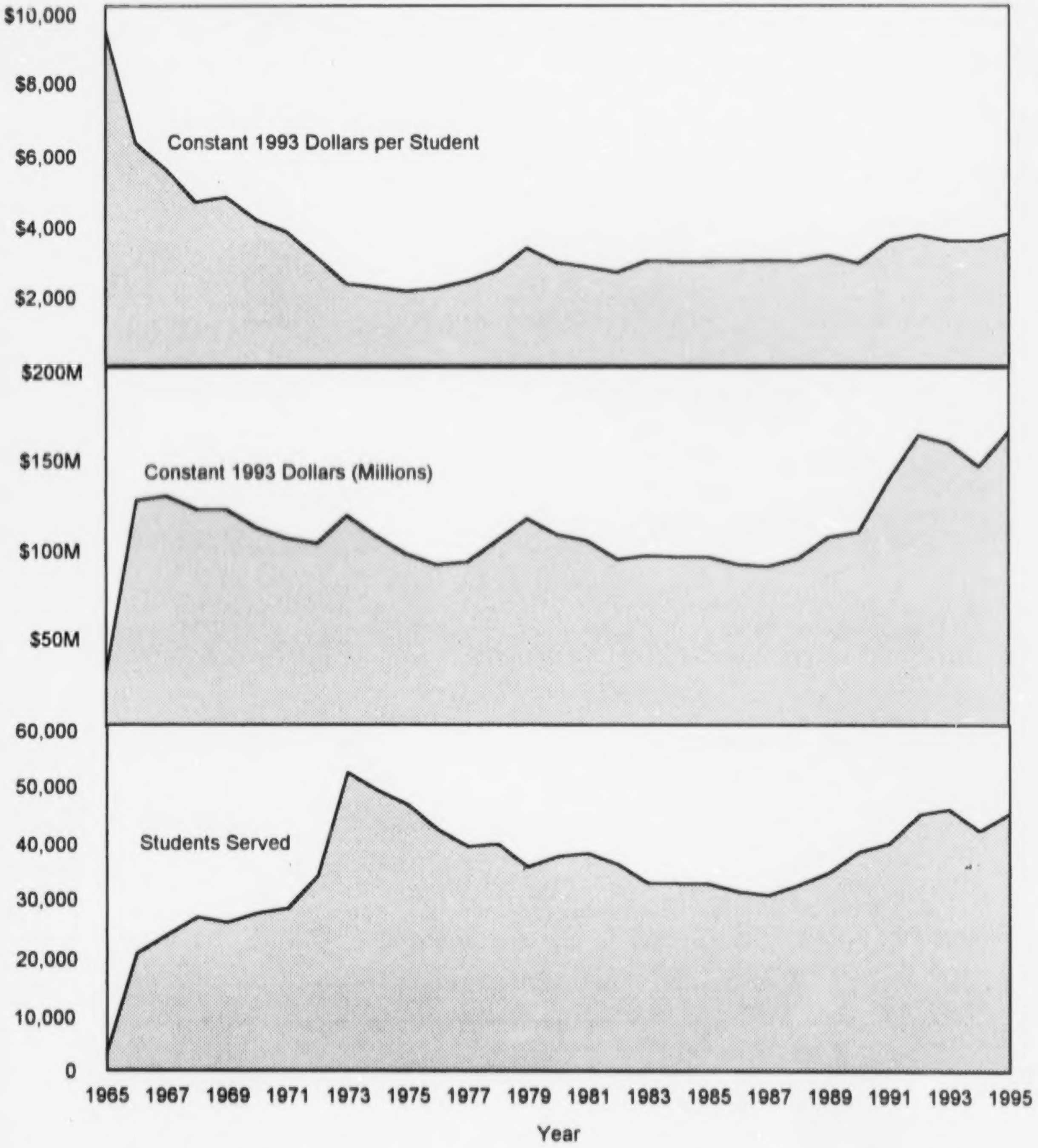
[9] Priority points are also used in other TRIO programs such as Talent Search and Student Support Services. Recent statutory changes that extend the length of Upward Bound grants to four and, in some cases, five years will also foster continuity among grantees.

[10] These amounts are calculated by dividing total annual funding by numbers of participants each year. In fact, projects vary in the amount they spend per student. An analysis of cost data obtained from the 20 projects selected for field visits shows that projects' 1992-1993 spending ranged from a low of $3,121 to a high of $5,369 per student, with average spending across the 20 projects amounting to $4,130. Despite the range in costs, almost two-thirds of the projects were tightly clustered, spending between $3,000 and $4,000 per student. The slightly higher amounts in 20 sites reflect the composition of the field visit sample, and the study's inclusion of all sources of support outside of federal Upward Bound funding.

FIGURE II.1

PATTERNS IN UPWARD BOUND FUNDING, 1965-1995

(Constant 1993 Dollars[a])



[a] With the exceptions indicated, all post-1970 data come from Planning and Evaluation Service Annual Evaluation Reports. Figures in constant dollars were calculated using the chain-type price index for state and local government expenditures.

In contrast, total program dollars increased by only 32 percent, and the number of participating students declined by 14 percent.[11]

A third federal policy, stable program funding until the 1990s, has shaped how the dual priorities of preserving project continuity and constancy of per student funding have affected expansion of the Upward Bound program.[12] The intersection of all three policies--relatively stable funding prior to the 1990s, project continuity, and relatively constant per student funding--created a long period during which ED had few extra funds to support new Upward Bound projects. Because most projects continued across grant cycles, and because the program attempted to support continuing projects at fairly steady levels of per student funding, new grants had to come out of the funds that remained once these obligations had been met. Between 1973 and 1988, when real dollars had decreased by 8 percent for Upward Bound, the addition of new grantees was clearly at a premium.

This picture has changed dramatically in the past eight years, however. As Figure II.2 shows, a major upswing in funding in the first half of the 1990s has meant the addition of a significant number

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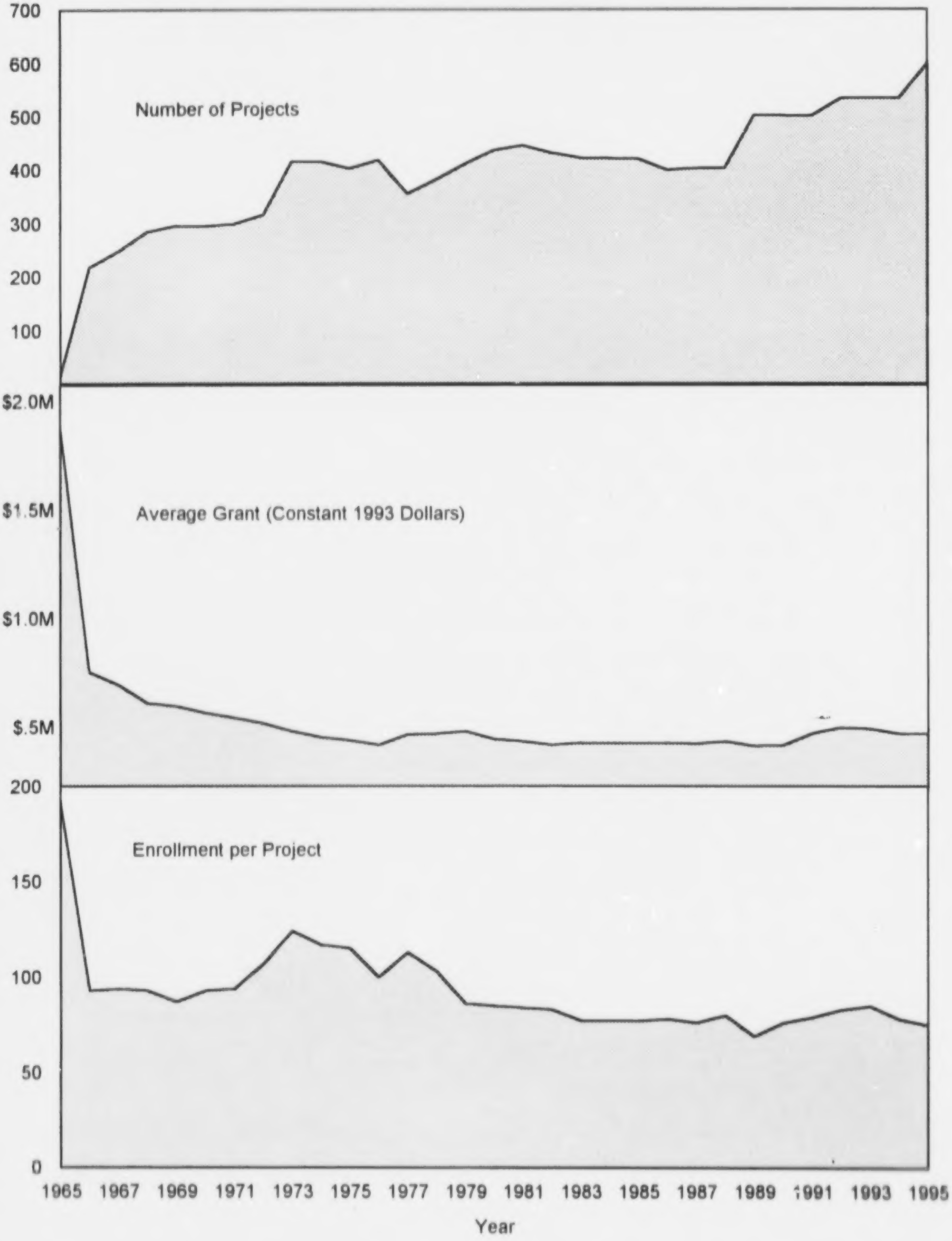
[11] Figures II.1 and II.2 include funds and grants for regular and veterans Upward Bound. Because data in Figure II.1 were compiled from ED publications and previous evaluations of Upward Bound, it generally is not possible to separate the two grant sources (regular and veterans). Veterans projects were most numerous in the years immediately after their establishment in 1972, when around 60 grantees were funded. After several years, however, veterans grants settled into a consistent pattern of about 30 each cycle. By law, veterans grantees must serve a larger number of participants (120) than regular projects and must focus on skills to obtain a high school equivalency degree and short-term refresher courses to prepare for college entry.

[12] Stable levels of funding for Upward Bound during the 1980s compare quite favorably to federal support (in constant dollars) for education programs as a whole. Funding for elementary and secondary programs declined during the 1980-1990 decade, dropping from $29.7 billion to $25.7 billion. Funding for postsecondary education programs dropped from $20.6 billion to $15.9 billion (Hoffman 1995).

FIGURE II.2

PATTERNS IN UPWARD BOUND GRANTEE FUNDING, 1965-1995



of new projects. From 1988 through 1995, constant dollars for Upward Bound increased by 75 percent, and the number of projects increased by 49 percent.[13]

The chapters that follow discuss significant findings relevant to the three themes outlined in this section: issues raised by the previous evaluation of Upward Bound, changes in the environment in which Upward Bound now operates, and the evolution of the federal policy framework. The next chapter begins this discussion by describing the consistency of Upward Bound projects both in terms of "who" they are and how they operate.

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[13] In fiscal year 1966 Upward Bound moved beyond the status of a pilot program. Not until fiscal year 1991, however, did the program reach funding comparable to 1966. In 1993-adjusted dollars, the program was funded at $130 million in 1966 and at $138.5 million in 1991. Noteworthy increases occurred in six specific years: 1973, 1978, 1979, 1991, 1992, and 1995. The larger than usual increase in the number of grantees funded in 1989 resulted from one Congressman's concern that an incumbent project in his district had been unfairly defunded in the ED awards process. To remedy the problem, ED had to fund additional grantees with higher scores below the cut-off. In 1992, Congress legislated that all continuation awards to projects had to be adjusted for inflation, subject to appropriation levels, and established a 1995 minimum grant level of $190,000 to apply once inflationary adjustments were addressed.

III. CONSISTENCY AMONG GRANTEES AND CORE OPERATIONS IS A DOMINANT CHARACTERISTIC OF UPWARD BOUND

Consistency is one of the most striking features of Upward Bound projects. This is hardly surprising in light of federal policies that specify a blueprint for projects to follow and that emphasize continuity. The consistency occurs at two levels. First, projects are consistent across time as a result of the small turnover in grantees and the limited number of new grantees that until recently have entered the program--in other words, there is continuity in who provides Upward Bound services. Second, projects are consistent in terms of their core operations--that is, their schedules, offerings, recruitment practices, and other basic program functions. Moreover, the first type of consistency reinforces the second, as a cadre of older projects creates a model of successful practice that younger projects emulate in an effort to secure federal program funds.[1]

A. CONTINUITY AMONG UPWARD BOUND GRANTEES

Federal policies promoting continuity have produced a striking concentration of older, experienced projects within the pool of regular Upward Bound projects. Half of the projects operating in 1992-1993, the focal year of the Grantee Survey, had been funded for more than 20 years, and most had operated continuously (Figure III.1). Over 75 percent had been funded for more than 10 years, and a mere 17 percent had existed for fewer than 6 years. This degree of stability among grantees is

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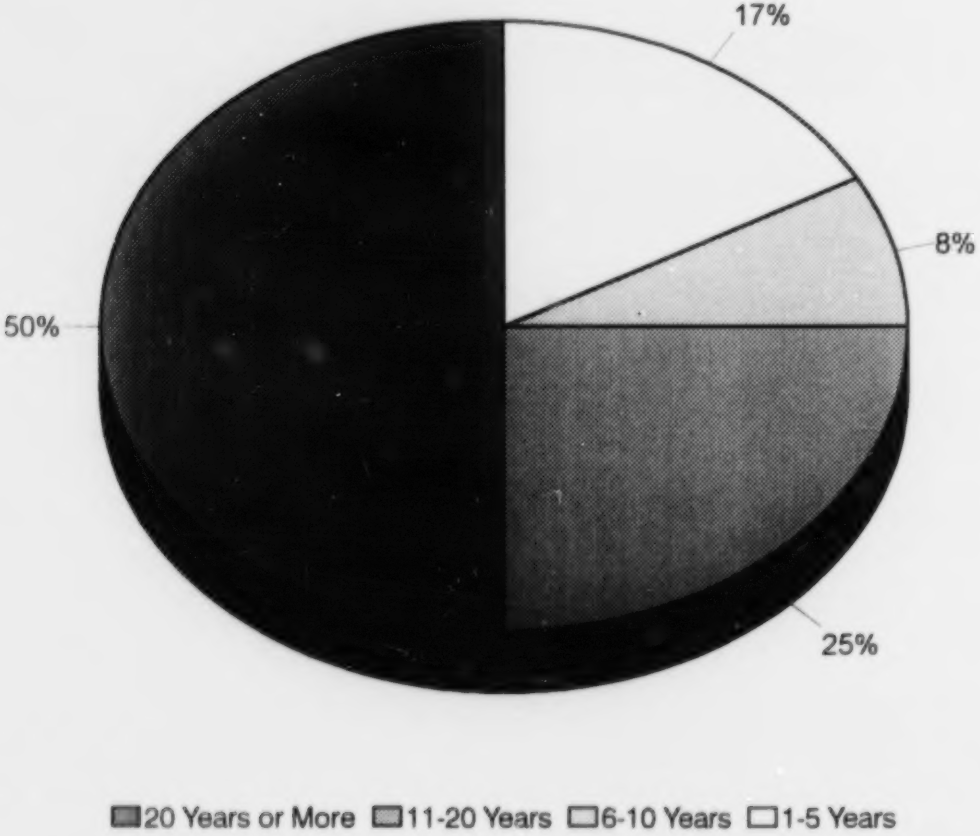
[1] Professional development is an important activity across Upward Bound grantees that helps to spread common understanding of requirements and model practices. It frequently occurs through annual meetings at the national, regional, and state levels. The National Council of Equal Opportunity Associations (NCEOA) is very active in offering opportunities for grantees to exchange best practices and in disseminating guidance about program implementation at these meetings. ED's budget instructions for grant applicants permit approval of annual travel for the project director and full-time professional staff members to attend such meetings.

FIGURE III.1

UPWARD BOUND PROJECTS' YEARS IN OPERATION



SOURCE: Fasciano and Jacobson 1995

reflected in other aspects of Upward Bound projects. For example, relationships with target schools show noteworthy durability. The majority of Upward Bound projects have worked for 10 years or more with their current target schools. These long-standing relationships are important in building projects' reputations, which help to recruit new applicants and attract good staff. Directors of Upward Bound projects also have considerable tenure with the program. Almost two-thirds have six or more years experience with Upward Bound, and almost half of this group has over 15 years experience. Other project staff, however, do not reflect the same level of tenure with the program, possibly because of the part-time status of several positions and federal encouragement in the program's earlier years to hire new staff every few years who would bring in fresh ideas and become youthful role models for the students.

A large degree of continuity clearly can be advantageous to the smooth delivery of Upward Bound services and projects' ability to perfect their programs, but without sizable amounts of incremental funding it can detract from the federal program's ability to respond to changing demands and to introduce promising approaches into traditional modes of operation. Until the increase in Upward Bound funding in recent years, this drawback was evident in the federal program's inability to show marked change in the composition of grantees and to benefit from an influx of providers with new ideas.

The limited presence of two-year postsecondary institutions as hosts to Upward Bound projects illustrates how policies favoring continuity and stable funding have combined to maintain the status quo. Despite the growing presence of two-year colleges over the past 20 years, four-year colleges heavily dominate the pool of Upward Bound grantees (Figure III.2).[2] As recently as 1992-1993, for

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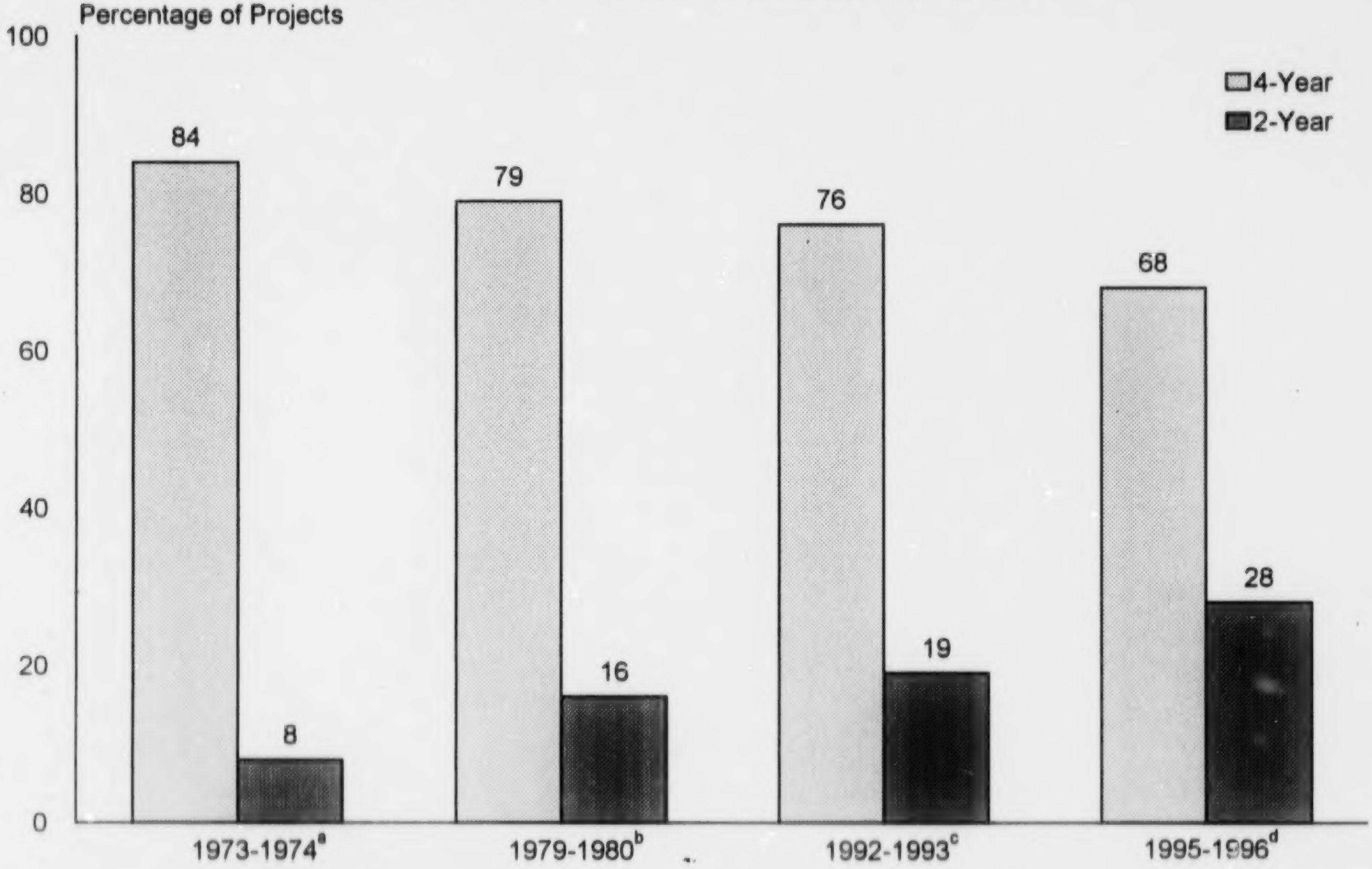
[2] From 1975 to 1993, full-time enrollment in two-year schools grew 28 percent while that in four-year schools grew 21 percent. The number of two-year institutions increased 27 percent in this period of time in contrast to 17 percent growth in four-year institutions. Two-year institutions now constitute about 40 percent of all postsecondary degree-granting institutions ("The Condition of Education" 1994).

FIGURE III.2

PERCENTAGE OF UPWARD BOUND PROJECTS AT TWO-YEAR AND FOUR-YEAR COLLEGES, SELECTED YEARS



SOURCES:
[a] Burkheimer et al. 1976
[b] U.S. Department of Education 1980, Annual Evaluation Report
[c] Fasciano and Jacobson 1995
[d] U.S. Department of Education, Division of Postsecondary Education, unpublished data

example, four-year colleges hosted 76 percent of all regular Upward Bound projects. In comparison, two-year colleges hosted a mere 19 percent. While this percentage constituted a notable increase over the 8 percent representation of two-year schools in 1973, it was well behind two-year institutions' 40 percent share of all postsecondary schools. A noteworthy increase in the proportion of two-year schools has occurred in the most recent rounds of grants, however, largely because real growth in federal appropriations has allowed ED to award a larger number of new grants and to spread these new grants more evenly between two-year and four-year schools. Within the 1995 group of grantees, for instance, two-year colleges account for an unprecedented 28 percent of all projects.[3]

What has project continuity meant for the geographic distribution of grantees across urban and rural parts of the nation? The most recent information on Upward Bound grantees reveals that approximately two-thirds are located at host institutions in urban areas, assuming that one defines urban according to the Census Bureau's metropolitan statistical area (MSA) classifications. However, about one-third of project staff at these "urban" institutions consider their location to be suburban or even rural. Given the lack of similar data, it is difficult to directly compare changes in the urban character of Upward Bound grantees over time. Inferentially, it appears that urban/rural patterns have changed little. The newer group of 1993 grantees in the recent Grantee Survey reflect the same two-thirds share of urban sites as the grantees funded more than 20 years ago.

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[3] An unresolved debate exists about whether two-year schools encourage or inhibit additional degree opportunities for students who attend these schools. Because minority and economically disadvantaged students are more likely to enroll in two-year schools, the issue has considerable importance for Upward Bound. In the early years of Upward Bound, ED overwhelmingly awarded grants to four-year colleges. The legacy of this era is evident in the fact that in 1992-1993, only three percent of the older group of Upward Bound projects (those with 20 years' duration) were located at two-year schools.

B. UPWARD BOUND GRANTEES HAVE VERY CONSISTENT CORE OPERATIONS

Consistency also characterizes the core operations and design of Upward Bound projects. This consistency flows primarily from Upward Bound's highly specified policy framework, but as previously noted, it clearly is reinforced by the continuity that exists in projects. Individual Upward Bound projects rely on very similar structures and modes of operation, much as the construction of model homes is based on a common set of architectural blueprints. Just as model homes can be customized to varying degrees according to the preferences of their owners, so do Upward Bound projects make some adaptations in their core operations. Most of the real variation in how projects function, however, occurs at a more micro level, involving such areas as specific course content, student selection factors, and requirements for students' continued participation. Consequently, in terms of basic elements, most Upward Bound students are exposed to a very similar precollege intervention. Only at the more detailed operational levels is it possible to observe "different" Upward Bound experiences for participating students.

The following findings from the recent Grantee Survey illustrate the consistency in cross-project core operations:[4]

- ***Student Eligibility***. Almost all projects exceed the criteria established in the federal eligibility rules by serving a higher proportion of low-income, disadvantaged students than the required two-thirds. Seventy-eight percent of students meet the two criteria of low-income and first-generation. Considered as distinct criteria, 87 percent of students in projects qualify as first generation and 77 percent qualify as low income.

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[4] The results for Upward Bound projects presented here and in subsequent chapters of this paper are based on a representative sample of regular Upward Bound grantees that operated in the 1992-1993 school year. This sample omits new grantees from the 1992 grants cycle. Because new grantees were unlikely to have all program components in place, they were excluded from the sample. For similar reasons, most statistics in this paper are based on a 90 percent subsample of grantees in the original sample. This subsample includes only those projects that met the following conditions: in existence for three years, within the 50 states or District of Columbia, hosted by postsecondary institutions (fewer than 4 percent were not), and not dedicated to serving only students with disabilities. Results from the subsample rarely diverge significantly from those obtained from the full sample.

- ***Recruitment and Selection of Students***. All projects rely on staff in the target schools and word-of-mouth to recruit new Upward Bound students. Consistent with Upward Bound's strategy to target specific students, the large majority of projects screen out applicants who are not educationally motivated (68 percent) or who exhibit behavioral problems (61 percent).

- ***Multi-Year Services***. Over 80 percent of Upward Bound projects strive to work with students for three to four years of high school, as evidenced by policies that concentrate admissions on the 9th and 10th grades. Ninety percent of projects offer a summer bridge program prior to college to extend services beyond high school graduation.

- ***Schedule and Intensity of Programs***. The vast majority of Upward Bound projects follow a common schedule that encompasses three-quarters of the academic calendar plus half of the summer break. Ninety percent of projects operate a summer program lasting six weeks, and 70 percent operate an academic year program that lasts seven or more months.

- ***Project Size***. Although project enrollment varies within the bounds set by federal rules, 1993 enrollment was distributed in roughly the same categories that prevailed in 1973. Around 60 percent of projects were of medium size, serving between 60 and 100 students, 20 percent were small (fewer than 60 students), and 20 percent were large (100 or more students).

- ***Simulation of the College Experience at a Postsecondary Institution***. Eighty-seven percent of projects in 1993 provided a residential summer program at a college campus.[5] Moreover, during the academic year, practically all projects based some of their program activities on campus.

- ***Education Levels and Race/Ethnicity of Staff***. Upward Bound projects uniformly employ staff who have the academic credentials and background to serve as role models for precollege disadvantaged youth. At least 90 percent of staff in the summer and academic year programs have a bachelor's degree or higher. All project directors hold a bachelor's degree, and most have obtained a higher degree (80 percent). In projects with more than half of the students from a single racial/ethnic group, the project director is typically of the same race or ethnicity as the group, and the ethnic/racial composition of staff in these projects also generally mirrors that of the participants.

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[5] This consistency is a function of the heavy dominance of four-year schools in Upward Bound. Practically all four-year schools (94 percent) offer a residential program, while just over half (57 percent) of two-year institutions do so. Projects that do not provide a residential program usually offer a six-week commuter-based summer program on campus. Surprisingly, the cost of residential and nonresidential programs did not differ greatly in the field study sites where costs were examined. In some cases, nonresidential programs spent slightly more than residential for transportation and staff in the summer program.

- ***Full Menu of Support Services and Stipend Support.*** Nearly all projects provide a broad array of services to help students prepare for college. Over 90 percent of projects reported at least one service in each of the following areas in 1992-1993: academic counseling, tutoring, study skills development, financial aid planning, personal development, career planning, field trips and travel to attend cultural events and to visit colleges, preparation for college living, assistance with college applications, and SAT/ACT test preparation. As allowed by federal law, almost three-quarters of projects (72 percent) award modest stipends to students, and the vast majority of these projects provide stipends to all students in the program.[6]

- ***Priority on Academic Instruction and Challenging Academic Courses.*** The vast majority of projects (79 percent) emphasize academic improvement as the most important goal for students. Almost all projects focus on a traditional core curriculum that comprises five subjects: writing/composition, reading comprehension and vocabulary, algebra I, algebra II, and geometry. Two-thirds of projects require students to take each of these courses.

Differences among Upward Bound grantees emerge at a more detailed level of operations and services, creating the widely shared perception among Upward Bound project directors and staff that "no two projects are alike." Yet, while the differences illustrated below explain why project staff perceive that their projects vary greatly, they far from offset the broad consistency that prevails in project core operations.

- ***Student-Staff Ratios.*** During the academic year 1992-1993, the ratio of students to staff ranged from 10 or fewer students per regular (full-time-equivalent staff member) to over 20 students per staff member. The summer program ratios differed less dramatically, but almost one-third of projects reported 5 or fewer students per staff member, and slightly over one-third reported ratios of 8 or more students per staff member.

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[6] Federal law permits student stipends amounting to no more than $40 per month in the academic year and $60 per month in the summer. Projects reported that 82 percent of students in the longitudinal component of the current evaluation received a stipend. The average amount awarded was $163 across the first 12 months of participation. This suggests that projects may vary in how they allocate stipends. They may pay smaller stipends than allowed either across the board or to first-year students, or may concentrate them in only one session of the program (for example, the summer).

- ***Course Content and Requirements***. The specific course content, the scheduling of courses and activities in the summer or academic year, and the number and specific Upward Bound courses that projects require are local decisions that range widely across projects. Furthermore, projects vary widely in the number and types of standards they consider in determining students' continuation in Upward Bound (for example, whether they focus on attendance, disciplinary problems, and academic achievement). The next chapter of this report presents detailed information about the variability that exists among projects' academic offerings and requirements.

- ***Selection and Admission Criteria***. Although the overwhelming majority of projects screen for applicants' motivation of behavioral problems, they differ in the mix of factors and the weights attached to each factor. Grades, disciplinary records, relative financial need, parenthood, gender, interest in college, and English proficiency were all considered differentially by projects in their selection decisions in 1992-1993.

- ***Instructional Methods***. Upward Bound projects reported using quite different methods of instruction in 1992-1993. Although the vast majority (88 percent) relied upon small group instruction, projects were divided over the basis for forming groups (that is, grade, skill level, or heterogeneous grouping). Forty-eight percent of projects reported using laboratory experiments with hands-on involvement, and about three-fifths used individualized, self-paced instruction or team-teaching approaches.

- ***Job Assistance***. Half of all Upward Bound projects in 1992-1993 offered students some form of work placement assistance. Although this occurred primarily during the summer program, almost one-fifth of projects helped students with work placements during the school year.

- ***Award of High School Credit***. Fifty-four percent of all projects indicated that none of their courses carried high school credit, while 46 percent indicated that some or all of their students received high school credit for Upward Bound coursework.

- ***Relationships with Target High Schools and Parents***. Although most projects do not seek in-depth collaboration with target schools and parents, they vary in the types and frequency of activities that involve target high schools and parents. These activities include input to student evaluations, curriculum workshops, parent financial aid workshops, Upward Bound curriculum development, home visits, and requirements for parents to contribute time.

- ***Types of Target Schools***. Although the target schools chosen by Upward Bound projects are primarily public high schools, these schools vary across other dimensions. The majority are larger (60 percent have enrollments over 750, and only 10 percent have enrollments under 300) and urban (60 percent). The poverty concentrations of the schools vary. One-third of target schools occupy a low-poverty tier (less than 20 percent of students are eligible for free lunch), and one-third occupy the high-poverty tier (above 40 percent of the students eligible for free lunch).[7]

C. PROGRAM IMPROVEMENT WITHIN THE CONTEXT OF CONSISTENCY

Has the Upward Bound program achieved an appropriate balance between policies promoting consistency and the institutionalization of services, and those fostering innovation and the ability to respond to change? The impetus for local projects to improve typically can come from several sources--a general perception of program weaknesses, systematic evaluations of program practices, and experimentation with distinctly different approaches. Generally speaking, improvements in the Upward Bound program, in areas such as increased professional development for staff and greater attention to academic instruction, have emerged via discussions based on the last national evaluation or broadly perceived notions of areas where the program required strengthening. Local evaluation-generated improvement occurs sporadically, however, and experimentation with very different approaches is rare.

In the context of the current evaluation, consistency has strengths and weaknesses. On one hand, Upward Bound has been highly successful in instituting a basic model of precollege assistance across projects. Since most students therefore have a very similar program experience, one can meaningfully relate the outcomes of the program to the general Upward Bound experience. On the other hand, one can question whether the kinds of variation that exist across projects are sufficient for detecting whether certain approaches and operational features are worthy of replication by other projects. The nearly universal use by Upward Bound projects of certain structures and services, affords no way to measure the contribution of these elements.

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[7] These data are presented in Chapter VI, Table VI.1.

With respect to fostering ongoing program improvements, however, the combination of Upward Bound policies that support consistency has resulted in some degree of inertia. For example, until recently, it has been difficult for the federal program to bring in "new blood" by funding a significant number of new grantees. Furthermore, there are few incentives in the federal grants review process for projects to experiment with new approaches that significantly reshape service delivery. The review criteria do not specify any points for evidence of innovation, and federal regulations specifically rule out research activities conducted by project staff. Field visits to projects indicate that Upward Bound staff perceive innovation as the fine-tuning of core operations. For example, when asked about recent innovative steps, project staff spoke of the introduction of a specific course--for example, one that emphasized contextualized writing or critical thinking skills focused on teen-age problems. They also mentioned the use of dialog journals, team-teaching, peer tutoring, or career awareness retreats on Saturdays in the school year. Rarely did they indicate comprehensive changes that might include, for example, infusing technology or contextualized learning throughout the instructional program.

Although the heightened emphasis on academics is a major and important change for Upward Bound projects, it does not exemplify a "bottom-up" change that has been independently generated by grantees. In fact, the move toward academic rigor that is evident among projects appears to have been driven as much by a top-down push from the federal level and popular pressure for more attention to traditional academics as by projects themselves. Broadly speaking, all education has shifted toward an academic emphasis.[8] In addition, the federal government signaled the importance of math and science courses within Upward Bound when it introduced a priority to establish Upward Bound math-science regional centers in 1991. Not coincidentally, Congress required all projects to offer a specific core of academic subjects shortly thereafter.

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[8] The percentage of all students completing the core academic courses recommended by the 1983 report, *A Nation at Risk*, has increased dramatically in the past decade and a greater number of students are taking math and science courses at the levels of algebra, biology, and beyond. The core that has come to be known as the "New Basics" includes 4 units of English and 3 units each of science, social studies, and mathematics. It also includes .5 units of computer science. Between 1982 and 1992, the percentage of high school graduates completing the core rose from 13 to 47 percent. Between 1990 and 1992, the percentage of high school students taking both geometry and algebra 2, and the percentage taking both biology and chemistry each increased 6 percentage points (to 50 and 54 percent, respectively) ("The Condition of Education" 1995).

IV. A RICH AND CHALLENGING ACADEMIC PROGRAM IS A CENTRAL FOCUS OF MOST UPWARD BOUND PROJECTS

All sources of information about Upward Bound program operations yield one over-arching conclusion: the great majority of Upward Bound projects today strive to engage students in an academically intensive precollege program. A focus on a rich and academically intense program of instruction closely aligns Upward Bound with a growing consensus among educational experts that students who spend more time learning challenging subject matter develop better academic skills and, as a result of this intellectual success, build the personal esteem and sense of efficacy necessary to master more challenging work.

The emphasis on academic instruction represents a significant shift from the 1970s' profile of Upward Bound projects as being largely remedial and providing only limited academic instruction to participating students (Burkheimer et al. 1979). This shift can be conceptualized as a continuum of instruction in which one end represents a focus on raising students' skills up to a level necessary to graduate on time from high school, and the other end represents a focus on academic rigor, where projects concentrate on helping students acquire academic proficiency in the most challenging high school courses. Projects today would generally cluster closer to the academic rigor end of this continuum, whereas 20 years ago they would have been grouped closer to the remedial end.

A. INDICATORS OF UPWARD BOUND'S ACADEMIC INTENSITY

Three indicators from the implementation studies provide evidence of the academic cast of Upward Bound: (1) the number of courses projects offer, (2) the nature and content of these courses, and (3) the course requirements projects place on students.[1]

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[1] The component of the current evaluation that entails longitudinally tracking a cohort of Upward Bound participants will provide a fourth, student-based indicator of academic intensity: the total (continued...)

First, in terms of sheer volume of academically oriented course offerings, Upward Bound projects appear intent on providing students with a strong academic experience. The Upward Bound projects included in the Grantee Survey reported offering a median of 17 summer-session academic courses and 10 academic-year courses in 1992-1993. In comparison, the RTI evaluation characterized 7 academic-year courses as a "wide range of courses" in 1973. It also bears mentioning that the courses reported in the Grantee Survey are in addition to tutoring, academic counseling, and a range of other services that entail academically related activities, such as SAT/ACT preparation and courses to improve study skills.

Second, the content and the nature of instruction at most projects demonstrate Upward Bound's academic intensity. Most projects offer courses reflective of a fairly traditional precollege preparatory curriculum even as they put forth a wide range of subjects for students to study.[2] Over 90 percent of projects emphasize a math and English core that consists of writing, reading, geometry, and two algebra courses. A striking 80 percent of projects offer chemistry, biology, literature, and pre-calculus. Moreover, half of all projects include calculus in the mix of subjects. Although the syllabi that comprise this array of courses were not examined to verify the actual content taught by instructors, the

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[1](...continued)
amount of time students have actually spent in the program's instructional activities. Results investigating the short-term impacts for the first year of participation indicate that students typically attended 179 Upward Bound instructional sessions. Assuming that each session lasts one hour, one can estimate that students received almost 25 percent more instruction beyond the regular school program. These estimates exclude time spent on homework. (Myers and Schirm 1996).

[2] For example, projects reported offering courses in Japanese, astronomy, accounting, economics, journalism, drama, psychology, developmental reading, anatomy and physiology, and geology.

course titles suggest that Upward Bound courses today go well beyond the remedial math and English that most projects offered in the 1970s (Burkheimer et al. 1979).[3]

The nature of the instruction--that is, whether it is directed at helping students catch up or at exposing them to content and skills they have not yet been taught--provides additional perspective on the academic orientation of projects. All projects in the Grantee Survey were asked to indicate the dominant thrusts of their instructional program, that is, whether the summer and academic-year efforts were aimed at teaching content that students' regular school programs had already taught (remediation), that the students were currently studying or would be studying in the near future (support), or that schools were unlikely to teach (enrichment). Coded responses from 53 percent of projects fell into categories that indicate these projects emphasized either enrichment alone or both enrichment and support (Figure IV.1). Only 3 percent reportedly had adopted an exclusively remedial emphasis. A considerably larger percentage of projects reported blending remediation with enrichment or support, or both. A singular emphasis on supporting students with studies similar to what they were or would be taking in high school (an approach grantee staff often described as "previewing") was reported by about one-fifth of grantees.[4]

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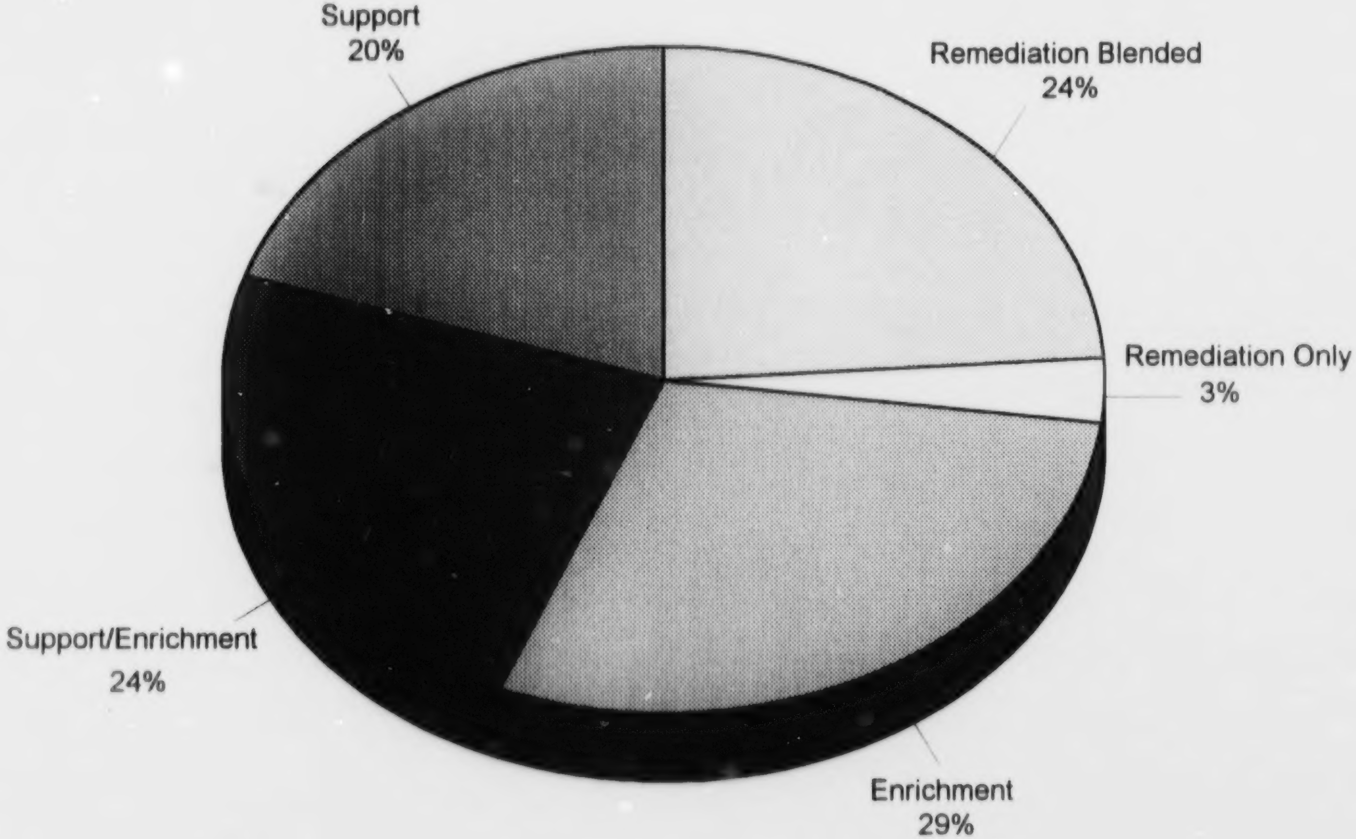
[3] Differences between questions in the earlier and recent survey of Upward Bound grantees hamper exact comparisons. The 1970s' picture of course offerings indicates that well over 80 percent of grantees provided students with remedial math and English courses in the summer, and well over half provided these courses in the academic year. About the same percentage provided "courses on improving reading," "other English courses," and "other mathematics courses."

[4] Grantees were asked to indicate the dominant instructional emphasis of the summer as well as the academic year component of their programs. The terms remediation, support and enrichment were not used in the survey question. Multiple emphases were allowed but not encouraged. In the results presented, responses have been collapsed into a single classification based on the focus of the summer program, where students on average, accumulate two-thirds of their Upward Bound course time.

FIGURE IV.1

DOMINANT EMPHASIS OF UPWARD BOUND PROJECTS' INSTRUCTIONAL PROGRAMS, 1992-1993



SOURCE: Grantee Survey 1992-1993

Field visits confirm the projects' own reports that most of them attempt to de-emphasize remediation and support and introduce subject matter that goes beyond students' current studies. These visits provide further insight into the approaches that distinguish remedial and nonremedial Upward Bound programs. Only two of the 20 projects visited operated remedial instructional programs; the other projects fell into two categories: those that blended academic-year instruction, designed to maintain student performance with a summer session dominated by enrichment courses, or those that sought on a year-round basis to introduce students to material that they would be unlikely to study in their typical high school programs. The projects with a remedial emphasis had a distinct mission: to keep students on grade level in high school, increase their GPA, and ensure they graduated on time. The summer programs in these projects provided the mechanism for ensuring that students did not have to repeat courses needed for graduation.

The visits to nonremedial projects revealed clear instructional differences from projects emphasizing remedial work. Generally speaking, the nonremedial programs sought to accelerate students' learning either through a concentrated summer learning experience or through a sustained diet of challenging fare. In some cases, the coursework in the most challenging nonremedial programs approached that taught in Advanced Placement courses. The possibility that students would not graduate from high school on time appeared remote in non-remedial projects. Finally, while remedial projects directed attention to students' affective development independent of coursework (for example, through leadership training), nonremedial projects were less inclined to focus on students' affective skills as a predominant strategy for improving their performance in high school.

The third indicator of the academic intensity of Upward Bound projects is based on projects' decisions to *require* students to take a specific number of courses and, in many cases, a specific combination of courses. Eighty percent of projects require at least 6 courses of students, and the majority of these specify a set of courses that must be taken. The most extensive set of requirements is found in the 36 percent of projects that assume a strong math/science orientation (Figure IV.2). This group of projects requires students to take reading, writing, algebra I and II, geometry, precalculus and calculus, and three science courses. Almost as many projects (31 percent) require students to take a program that might be described as foundational. This curriculum includes every course required by the math/science projects but excludes precalculus, calculus, and science courses. Only a few projects (16 percent) eschew requirements as a means of structuring students' instructional regimen. These "unstructured" projects neither require students to take a minimum of six courses, nor do they specify the subjects that students must take.

One might expect types of curricular requirements to be associated with other features of projects, such as size, the host institution being two-year or four-year, the abilities of the students enrolled, or the dominant focus of a project's instructional program (that is, remediation, support, or enrichment). So far, however, analyses have only detected a relationship with project size and dominant focus. The math/science curriculum model is significantly more common in large projects (that is, projects with 100 or more students) than in small projects.[5] Projects with more students (and more total resources) appear to have the capacity to offer the more challenging, specialized science and math courses and to hire instructors qualified to teach these subjects. As projects' dominant focus shifts from remedial to support to enrichment, they are more likely to require a foundational or math/science curriculum. A noteworthy number of projects do not conform to this pattern, however.[6]

The lack of overwhelming relationships between a specific curriculum model and other project characteristics has two implications. First, the academics-first transformation appears to have widely

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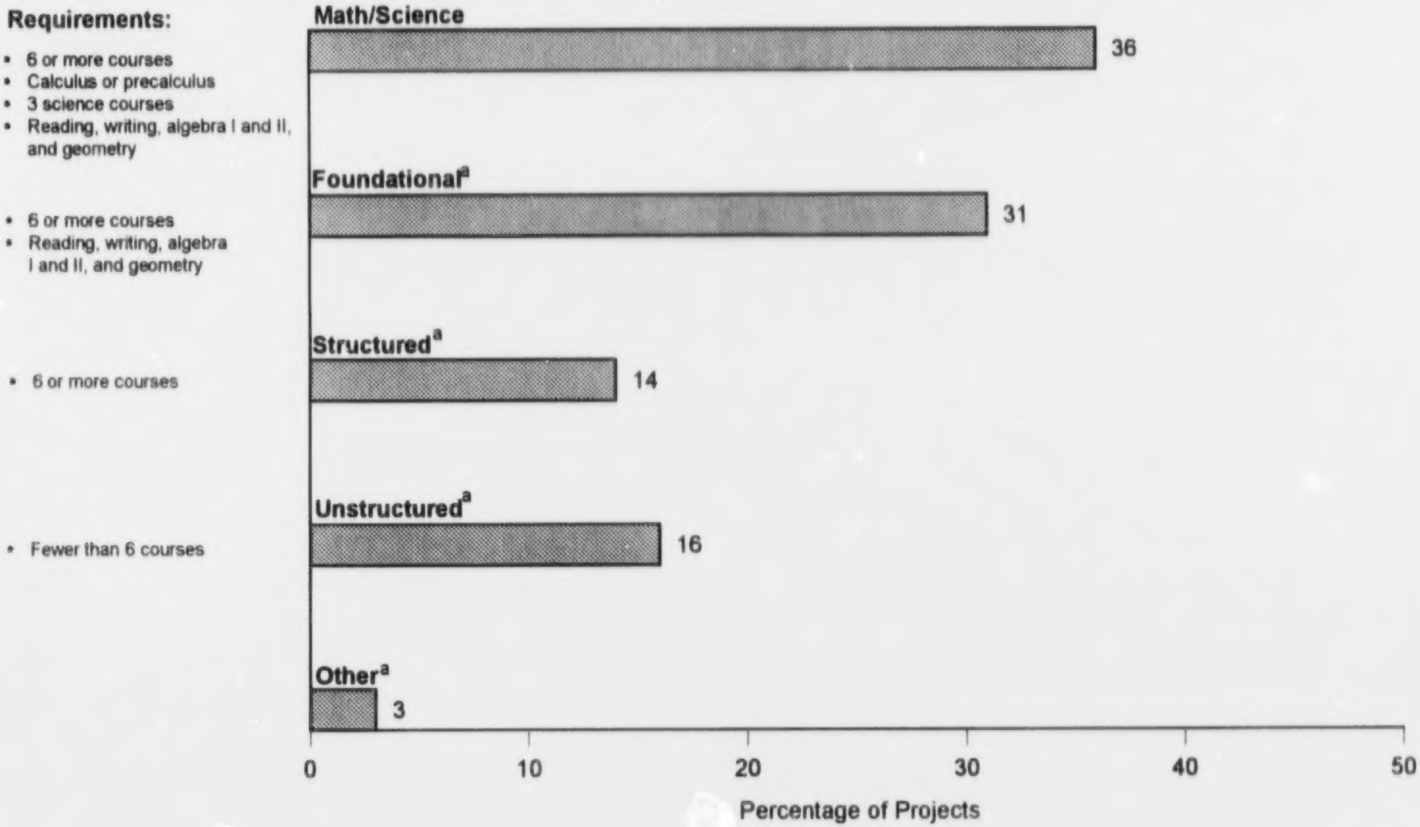
[5] The relevant breakdown of the math/science model among projects of different sizes is as follows: 45 percent of math/science programs are located in large projects, 34 percent in medium-size projects, and 28 percent in small projects (60 or fewer students).

[6] These results are presented in Appendix B.

FIGURE IV.2

TYPES OF CURRICULUM REQUIRED BY UPWARD BOUND PROJECTS, 1992-1993



SOURCE: Fasciano and Jacobson 1995

[a]Does not include combination of required courses in any preceding category

penetrated Upward Bound projects. It is not just projects with a math-science orientation that report a nonremedial focus. Second, the indicators of academic intensity--the number of courses offered, the nature and content of these courses, and the course requirements--can represent fairly independent choices for projects. Each avenue reflects a project's choice of some version of academic intensity, but the reasoning that leads projects to choose one route does not systematically lead them to follow others.[7]

B. UPWARD BOUND IS MORE ACADEMICALLY INTENSIVE THAN MOST ALTERNATIVE PRECOLLEGE PROGRAMS FOCUSED ON DISADVANTAGED STUDENTS

A comparison of Upward Bound projects with other precollege programs opens yet another window on the academic intensity of the Upward Bound program. Comparisons of the academic intensity of precollege programs ideally involves two considerations: (1) the time that students are involved in the program and (2) the level of the subject matter. In general, Upward Bound exceeds most other precollege programs that are focused on disadvantaged students in terms of the amount of time devoted to academic instruction. Although little direct information is available about the academic content of alternative precollege programs, there is some recent evidence indicating that Upward Bound projects seek to provide a more challenging academic experience than many other precollege assistance efforts sponsored by postsecondary institutions (Chaney et al. 1995).

A recent compilation describing 48 precollege programs other than Upward Bound reveals that few programs equal Upward Bound either in the length of the summer program (the longest noted was four weeks compared to Upward Bound's six weeks) or in the sustained nature of the experience (Westat 1992). For example, unlike the large majority of Upward Bound projects, few seek to engage students for three to four years.[8] Furthermore, most alternative programs included in the compilation rarely focus on academic instruction during the school year. Those that do, offer fewer Saturday or after-school sessions than Upward Bound. It is possible, of course, that these alternative programs may cover more in the limited time that students participate in them. Such concentration, however, is extremely difficult to assess other than through the careful inspection of syllabi and the observation of actual courses. These approaches have yet to be applied to Upward Bound courses or to those in other precollege programs.

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[7] A major difficulty in constructing an index of projects' academic intensity using multiple measures is the complexity of instructional programs and the inherent limitations of survey data. For example, project directors in the Grantee Survey responded to separate questions that asked them to indicate their projects' emphases, offerings, and course requirements. One project that offered a demanding math/science curriculum that included calculus, for instance, claimed to focus on remedial work (defined as previously taught material) since the students had to sharpen their math proficiency in order to perform well in the more advanced math courses.

Comparisons of course content between Upward Bound and alternative precollege programs show a similar pattern. Upward Bound projects place greater emphasis on traditional academics and more advanced material. According to recent survey findings (Chaney et al. 1995), there are distinct differences in the services reported by precollege projects hosted by postsecondary institutions as being among the three most important services offered. "Accelerated courses below the college level" were listed with greater frequency by Upward Bound projects as among the three most important (35 percent versus 10 percent for non-Upward Bound projects) as were "other supplemental courses" (44 percent versus 28 percent). The opposite relationship prevails with respect to the importance attached to social skills development. Alternative precollege projects were much more likely than Upward Bound projects to list these services as the most important offered (51 percent versus 26 percent, respectively). Despite the impression these results may give, there is a small band of alternative precollege projects that emphasizes college-level courses. The same survey of postsecondary institutions brought to the surface a larger percentage of alternative projects that indicated college-level courses among their top three services than did Upward Bound projects (15 percent versus 5 percent, respectively).[9]

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[8] The longer periods of participation sought by Upward Bound projects are also confirmed by recent data analyzed by Chaney et al. (1995).

Alternative precollege programs are not simply a basis for assessing the relative academic intensity of Upward Bound. They also may contribute to the increased academic emphasis of projects either through allowing Upward Bound to differentiate into a program focused on intensive academic preparation or through exerting competitive pressure on Upward Bound grantees to increase academic offerings in order to maintain a pre-eminent position in the community. For example, many of these alternative precollege programs also may have strengthened their academic components as the result of the external forces that call for heightened attention to traditional academic subjects.

The influence of other precollege programs on Upward Bound offerings can only be speculated about, given the lack of information about the dynamics that occur when more than one precollege program is present. Remarkably, 70 percent of the target schools served by Upward Bound had one or more additional precollege programs in 1992-1993. Most schools (48 percent) reported only one additional program, which was typically the federal Talent Search program. The widespread presence of Talent Search across Upward Bound target schools could promote the type of differentiation described above, since Talent Search already functions as a less intensive alternative to Upward Bound and according to law, cannot simultaneously provide services to students in Upward Bound.

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[9] The survey conducted by Chaney et al. (1995) was not based on a representative sample of Upward Bound projects. Rather, the survey drew a representative sample of postsecondary colleges and inquired about their largest precollege program, based on funding. Thus, the results reported apply only to situations where Upward Bound is the largest precollege program at the host college or the only precollege program. Because Upward Bound projects often were the largest in their host institutions, few differences in findings are likely based on these sample constraints.

C. CHANGES IN UPWARD BOUND SERVICES TO ACCOMMODATE INCREASED EMPHASIS ON ACADEMICS

The heightened attention to academic instruction within Upward Bound projects raises the question of whether projects have discarded or reduced other program components or engaged other solutions in order to accommodate this shift in emphasis. It is difficult to definitively answer this question because comparable data from the 1970s are not available. Still, there is evidence in three areas to suggest that projects have made some changes to accommodate the shift to emphasizing traditional academic courses.

1. Projects are much less likely to offer courses in the social sciences, having turned their attention instead to courses in the hard sciences.
2. Projects reported expanding the number of courses they now offer, and they appear to use the academic year more frequently to provide courses. According to the 1970s' descriptions of project schedules, many projects used the academic year only to tutor and counsel students (Burkheimer et al. 1979).
3. There is little evidence that the range of cultural and support services has narrowed, except in the area of assisting students with job placements during the school year. The share of projects that offered job assistance in the academic year declined from 75 to 18 percent in 1974-1993 (Burkheimer et al. 1979, Grantee Survey).

The first two changes reflect projects' responses to prevailing views of how to strengthen students' academic performance--that is, through the study of the physical sciences and a net increase in instructional time. Generally speaking, these changes do not constitute a major reduction in previously provided services; in fact, the expansion of course offerings represents a clear gain in services.

The impetus to disregard job placement assistance in the school year does qualify as an area of diminished service--one that may be involved with a heightened emphasis on academics. Some members of the Upward Bound community have long held strong opinions about the potential harm that may come when school work competes with jobs for students' time. While such concerns may have logical appeal, little data have been available to assess their applicability to Upward Bound students. Equally troubling are projects' difficulties in retaining students because of job pressures. Responses from the vast majority of students who leave Upward Bound and project directors indicate that jobs are a major reason for dropping out (Fasciano and Jacobson 1995, Myers and Schirm 1996). Viewed from this perspective, discarding job assistance as an Upward Bound service may be an unfavorable development linked to projects' efforts to increase academic intensity.[10]

D. THE PARADOX OF NO CHANGE IN THE AWARD OF HIGH SCHOOL CREDITS FOR UPWARD BOUND COURSES

Despite an increased emphasis on academic instruction, it is surprising that Upward Bound projects today are no more likely to offer courses that earn high school credits than in the 1970s.[11] Reinforcing this surprise is the fact that the award of high school credits appears to be an important influence on early student outcomes. Analyses of short-term impacts indicate that the award of high school credits for Upward Bound participation is clearly linked to the gains in the number of academic credits that Upward Bound students earn in the first 12 months of the program (Myers and Schirm 1996). Nevertheless, many projects do not engage in this practice. In the 1970s and in 1992-1993, about half of the grantees reported that their students did not receive high school credit for Upward Bound courses. Nineteen percent of projects in 1992-1993 indicated that all of their students received some high school credit for Upward Bound courses, and 27 percent of projects reported that only some students received credit for Upward Bound.

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[10] Federal rules governing Upward Bound do not include job placement among the examples of services projects may offer. The rules do note activities that acquaint students with a range of career options. Conversations with project directors who provide job assistance reveal two motives: (1) to make Upward Bound more relevant to students' future careers and (2) to reduce financial pressures on participating students. Most job assistance occurs in urban projects and is aided by the presence of funds from the Jobs Training Partnership Act (JTPA).

[11] Almost two-thirds of Upward Bound projects reported all summer bridge students received college credit for courses. Field visits reveal that some Upward Bound students obtained college credit for courses prior to the summer bridge component of the program. It is currently unclear how frequently this occurs.

The failure to see a rise in the award of high school credits in light of the increased rigor of Upward Bound courses may be explained by factors that have little to do with the academic challenge of the courses themselves. One group of factors is the procedures and policies necessary for course approval. School districts and states typically establish the standards that courses must meet to qualify for credit. It is likely that these entities have tightened approval standards over the years as part of the national movement to make traditional academic subjects more challenging. In short, it may be a much more demanding task for projects to have courses approved for credit in the 1990s. Furthermore, considerable red tape and inflexibility may be associated with course approval in some locales.[12]

A second group of factors focuses more on the consequences for students. Projects may harbor concerns that credit for Upward Bound courses will have potentially negative consequences for students. For instance, some projects may not seek high school credits for Upward Bound courses in order to relieve students of the fear that they will fail courses that at first seem beyond them or to ensure that students do not substitute credits earned in Upward Bound for credits earned in the regular school program. If students were to use credits from Upward Bound to reduce the time in regular school courses, they would frustrate the implicit goal of increasing the total instructional time they receive.

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[12] Alternatively, some projects may be more invested in having Upward Bound courses approved for advanced college credits. The Grantee Survey, however, did not ask project staff to report college credit for students not in the bridge component of the program.

V. UPWARD BOUND PROJECTS ARE STUDENT CENTERED; PARENT- AND SCHOOL-CENTERED ACTIVITIES ARE SECONDARY

Upward Bound projects remain firmly centered on directly influencing students, not on changing institutions. Accordingly, the large majority of projects place only secondary importance on interaction with key institutions in the student's environment--in particular, the student's family and school. The earlier evaluation by RTI and project directors' responses to questions about recent shifts in operations show that the priority grantees place on the involvement of parents and collaboration with schools has changed little over the past 20 years.[1] Although no proposal currently seeks to redirect the focus of Upward Bound to parents and schools, policymakers reasonably ask whether projects are taking full advantage of the potential of parents and schools to reinforce the preparation students receive through Upward Bound. Furthermore, if the involvement of Upward Bound staff in the reform of high schools presents the potential to extend help to other students who cannot be directly served by Upward Bound, projects might usefully seek to become more involved in school reform efforts.

Blending a student-centered focus with a focus on the other institutions in the students' lives is not an entirely new issue for the Upward Bound program. In the program's earliest years, federal leaders entertained the idea that the program would produce spill-over effects that reach beyond the small number of students whom projects directly serve.[2] Program guidelines from the early 1970s called upon projects to serve a reasonable number of target schools to increase the possibility of achieving such spill-over effects, but this guidance soon disappeared.[3] More recently, concern about institution-centered change has emerged in the form of initiatives for systemic change. Not surprisingly, many of the recent precollege programs have espoused strategies involving both professional development programs for teachers of disadvantaged students and efforts to restructure entire schools in lieu of targeting specific students for assistance (McMullan et al. 1992).[4] Moreover, policies attempting to capitalize on the influences of the home have captured the attention of many policymakers. There is broad consensus based on research that the active involvement of parents is a key factor in improving disadvantaged students' academic performance and, in turn, their post-school opportunities (Epstein 1995, Rioux and Berla 1994, U.S. Department of Education 1994 and 1996).

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[1] No more than one-quarter of staff (project directors as well as instructors and counselors) who were surveyed in the RTI evaluation reported parent involvement as among the three most emphasized functions in their projects. RTI authors described most relationships with target school staff as cooperative and open, but possibly because few earlier studies had found evidence of strong interaction, the authors devoted little attention to examining spill-over effects or specific areas of collaboration (Burkheimer 1979).

An important question for Upward Bound is whether the current levels of involvement for parents and target school staff are sufficient in light of the program's overall design, objectives, and resources. Since the purposes, issues, and nature of parent involvement and target school collaboration differ in significant ways, each of these is discussed separately.[5]

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[2] Anecdotal evidence from the early years of Upward Bound suggests that the unrest on many college campuses casts an air of suspicion around Upward Bound's presence in local high schools. Observers suggest that this atmosphere may have impeded projects' efforts to participate in school reforms.

[3] The 1969-1970 federal guidelines for Upward Bound advised projects to work closely with a few high schools, and whenever possible, to use target school staff as Upward Bound instructors and counselors.

[4] Systemic (or institution-centered) precollege initiatives usually involve one or a combination of the following: teacher renewal, curriculum redesign, and school restructuring (for example, instituting smaller classes in combination with training teachers to use new instructional methods). The principal argument in their favor is the broader leverage they can have as schools prepare successive waves of students for postsecondary education. On the negative side, institution-focused programs risk becoming diluted across the school and may produce few results in the early phases, thereby failing to sustain commitment.

A. PARENT INVOLVEMENT ACTIVITIES ARE OFFERED WIDELY BUT INFREQUENTLY BY PROJECTS

Focus groups conducted with parents and students in the field visits to Upward Bound projects and results from the student baseline survey confirm what may seem obvious: parents of Upward Bound students play an important role in encouraging students to apply for admission and in reinforcing students' college aspirations. Compared with low-income students in general, students surveyed in the impact study of the national evaluation reported that their parents are more engaged in their schoolwork and in discussions about future education (Myers and Schirm 1996). Common sense indicates that parents will have a long-term presence in many students' lives, influencing their children's decisions about college, living away from home, and continuing with postsecondary studies when faced with difficult family and financial issues.

The great majority of Upward Bound projects acknowledge the critical roles played by parents through sponsoring opportunities to allow communication with parents. A large percentage of projects involve parents through written evaluations sent to the home, discussions about students' performance and plans, financial aid workshops, and home visits (see Figure V.1). From the perspective of frequency of parent-focused activities, however, the majority of Upward Bound projects clearly assign a subsidiary role to parent involvement relative to projects' interactions with students. Only half or fewer projects offer any of the parent-involvement activities listed in Figure V.1 more

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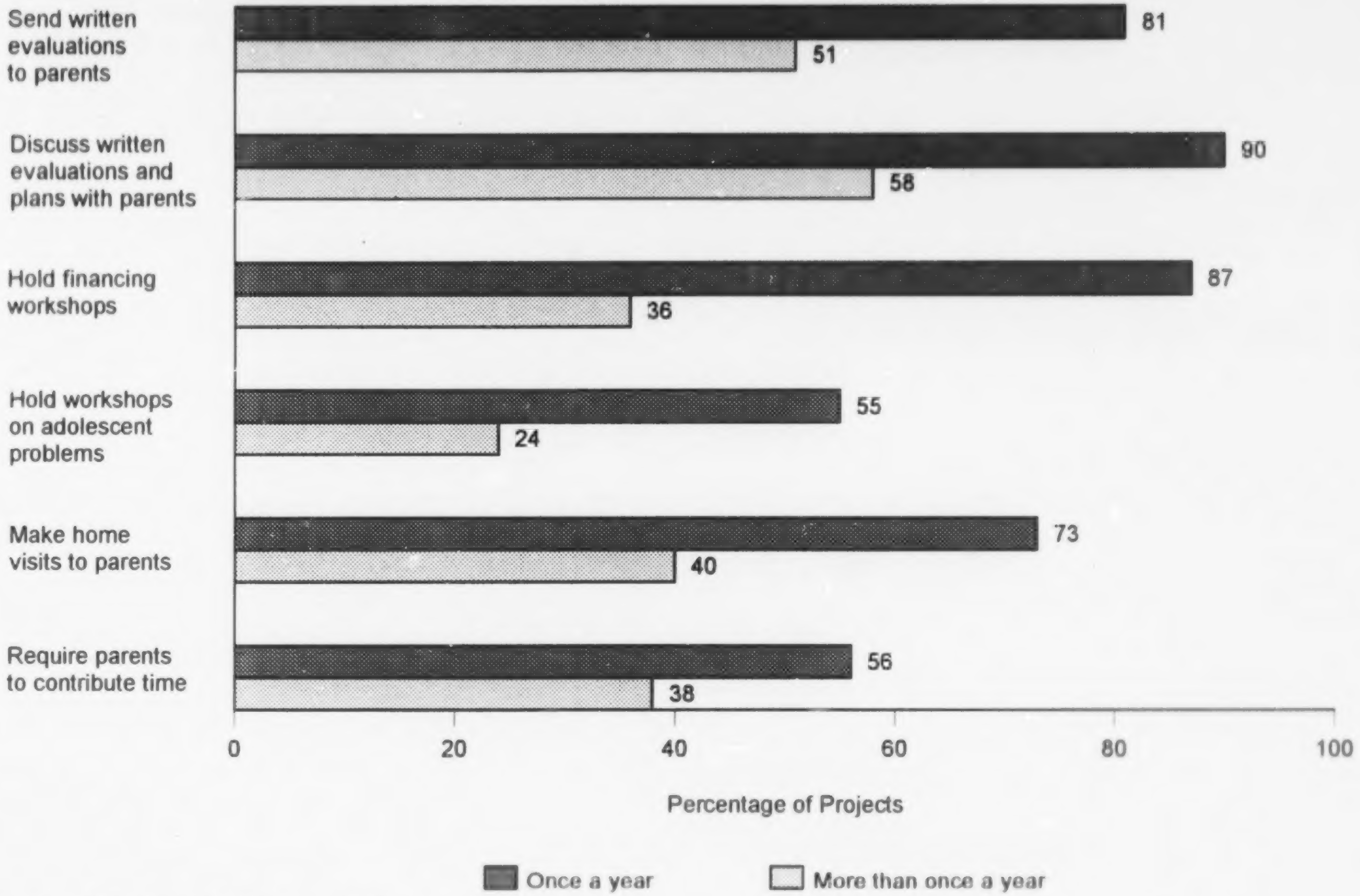
[5] The term target school also means feeder school and includes any school from which Upward Bound projects have received applications and admitted students. The great majority of target schools are public high schools, with the larger percentage located in urban areas and enrolling over 750 students.

FIGURE V.1

UPWARD BOUND GRANTEES' REPORTS OF PARENT-INVOLVEMENT ACTIVITIES



SOURCE: Fasciano and Jacobson 1995

than once a year. And only about one-quarter of all projects conduct any activity listed more than six times a year. In sum, grantees divide into two camps with respect to the intensity of their efforts to involve parents in the Upward Bound program: a rather large majority of projects annually conduct a common core of one-time activities with parents, while a small minority of projects provides more frequent and varied opportunities for parents to be active in the program.

The infrequency of project-sponsored activities for parents in many projects confirms the perception expressed by a sizeable segment of parents in the focus groups held during field visits to projects: namely, that some parents have only a modest amount of contact with and few opportunities to participate in the Upward Bound program. The clear message was that these parents would value more opportunities.

Several factors may explain why the majority of Upward Bound projects invest only moderately in efforts to promote parent involvement.[6]

- ***Limits on Staff Resources***. Projects rarely have an abundance of staff to perform functions beyond recruitment, selection, counseling, instruction, and general administration. During the academic year, projects average about 4 to 5 full-time-equivalent (FTE) staff to cover these functions; in the summer session, the number grows to around 10 FTEs. Projects may be reluctant to reduce commitments in existing areas and contact with students in order to free more time for activities with parents.

- ***Mild Federal Emphasis on Parent Involvement***. Currently, the federal criteria for review of projects' grant applications only mildly stress the importance of parent-involvement activities. Grant applicants are required to show in their operational plan how they will "work *cooperatively* with parents and key administrative, teaching, and counseling personnel at the target schools to achieve program objectives" (emphasis added).[7]

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[6] The explanations listed are similar to those noted in other research studies that have found low parent involvement in secondary school programs for disadvantaged youth (Zeldin et al. 1991).

[7] At one point in Upward Bound's history, federal rules required projects to establish parent advisory committees. Evidence from the 1970s indicates that these committees did not stimulate a major investment in parent involvement across most projects. RTI reported that projects placed modest emphasis on parent involvement despite the fact that three-quarters of projects had parent (continued...)

- ***Parents Offer Less Direct Results***. The reluctance to commit greater staff resources probably reflects the more tangible, immediate outcomes that staff expect to achieve from working directly with students. With three exceptions--communicating with parents to reinforce the importance of school and college, gaining support for program activities, and affirmation of students' cultural backgrounds--the benefits expected from parent participation--and the specific outcomes--may be difficult to identify.

- ***Perceptions of Competing Demands on Parents***. Contrary to what parents expressed in the focus groups, a number of project staff interviewed in the field visits felt parents often could not, or would not, take the time to become involved in program activities. The large fraction of Upward Bound students from single-parent homes (just over half in 1993-1994) and students who live with someone other than a parent may reinforce this perception. Focus groups also revealed that several Upward Bound students perceived their parents as being overwhelmed by other pressures and unable to devote time to the program.

Many of the reasons given by some projects for only modestly promoting steps to promote parent participation become self-fulfilling prophecies. In one project included in the field visits, staff perceptions of parents' preoccupations with other matters caused them to offer parents few opportunities to participate in the program. After the staff were pressed by a few parents to schedule more meetings, they were stunned when parents turned out in large numbers.

Despite this singular instance of success, the factors that hinder greater intensity of parent involvement in Upward Bound suggest that it may take more than a "just-do-it" campaign. Greater endorsement of various opportunities for parent participation as part of the federal grants recompetitions may heighten grantees' attention to this area. However, a necessary step is a careful assessment of (1) whether extra effort devoted to parent involvement will yield significant results for students of this age and (2) what forms of involvement are likely to overcome established barriers and produce such results. Part of this assessment should entail a clarification of the objectives for parent

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[7] (...continued)
committees (Burkheimer et al. 1979). Today, these committees are reported at only one-half of projects.

involvement--for example, whether the goal is parents' participation in the Upward Bound program or parents' becoming directly engaged in their child's education. If the latter is the objective, projects might choose to concentrate on acquainting parents with techniques for working effectively with high school staff or equipping parents with tools to bolster students' resolve once they enter college. Current research about effective ways to involve parents of high school students is limited; most research focuses on younger children.[8] Despite the limited evidence to date, it would be incorrect to assume that parent involvement in a variety of forms has little influence on the student outcomes sought by Upward Bound. As Rioux and Berla (1994) observe, "(t)he parent or guardian who takes the position that the high school student needs them less and that they are now on their own is making a costly mistake." In fact, recent published findings indicate that parent involvement, particularly in the form of attending school events, can be a factor in reducing teenagers' rejection of academics (Kaufman and Bradley 1992; Steinberg, Brown, and Dornbush 1996).

B. INTERACTION BETWEEN THE MAJORITY OF TARGET SCHOOLS AND UPWARD BOUND IS LIMITED

Evidence from the surveys of target schools and Upward Bound grantees indicates that the large majority of projects interact with school staff on matters of recruitment and screening. Projects rarely engage in activities with school staff intentionally designed to produce spill-over effects for students not participating in Upward Bound. Even at the level of interactions designed to reinforce and improve Upward Bound students' skills, collaborative endeavors between school staff and Upward Bound staff are fairly modest. These findings are the product of two common practices: (1) most projects narrow the involvement for target school staff to specific areas, and (2) a majority of projects work with a fairly large number of target schools, thereby limiting the extent to which staff from all of the schools can interact with the project.

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[8] Research at Johns Hopkins' Center for Research on the Effective Schooling for Disadvantaged Students has examined effective parent involvement techniques for parent-school partnerships for children in the elementary and middle schools. These techniques may hold promise for students in high school (CDS Newsletter 1991). Rioux and Berla (1994) describe five high school focused programs of parent involvement that appear successful. These authors note, however, that commitment and high-quality operating programs are hard to find.

1. Circumscribed Roles for Target School Staff

Project directors and liaisons in the target schools, although very positive about their overall relationship, have conflicting views about the range of areas in which staff interact. One key to resolving these discrepancies is to consider the infrequency of the interactions and the types of staff involved in them. From the perspective of projects, interaction with target schools occurs in several areas: working together on plans to improve participating students' performance, hiring school faculty as Upward Bound instructors, and involving school staff in developing Upward Bound courses and services (Figure V.2). Yet, while well over two-thirds of project directors reported that these activities take place once a year, a considerably small fraction reported that they occur more frequently.

From the perspective of the estimated 4,000 target schools in the nation, recruitment and screening of students are the major areas in which school staff are closely involved with the Upward Bound program. Within target schools, these functions are typically performed by a guidance counselor or other faculty member, so they rarely encompass other faculty or staff. In fact, less than half of all target schools indicated that staff are involved in planning Upward Bound courses and services, and less than one-third reported staff involvement in other functions (for example, visiting project classes, serving as instructors, or participating in workshops).[9]

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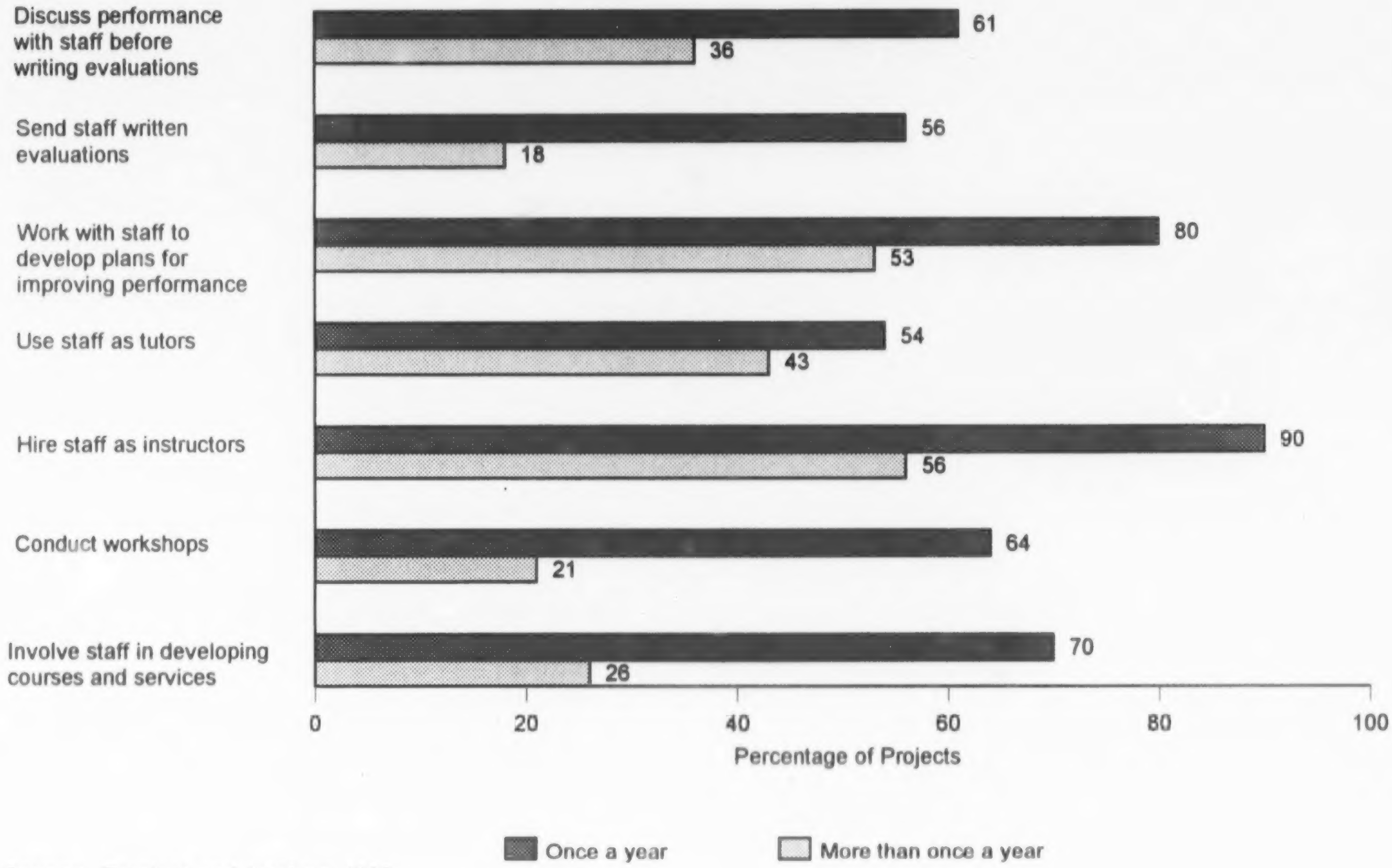
[9] A scale ranging from no to "full" integration of target school staff measured the extent of target school/Upward Bound interaction in a hierarchal sequence of four areas: recruitment; workshop participation; involvement in planning curriculum, services, or improved student performance; and employment as an instructor in Upward Bound. Only one in ten schools exhibited full integration as consequence of having reported staff involvement in all four areas.

FIGURE V.2

UPWARD BOUND GRANTEES' REPORTED INVOLVEMENT WITH TARGET SCHOOL STAFF



SOURCE: Fasciano and Jacobson 1995

2. Projects Tend to Serve Many Target Schools

A second reason for the low level of interaction between most target school staff and Upward Bound projects is the large number of schools served by Upward Bound projects. Upward Bound projects work with an average of 10 schools and enroll around 8 students from each. This means that projects commonly enroll only about 2 or 3 percent of the students in any target school (Waldman et al. 1995). It also means that projects routinely come into contact with a few faculty in the course of sending written evaluations to teachers or obtaining faculty members' input on plans to improve performance. Similarly, while projects often hire target school teachers as instructors or tutors, they can hire only a few staff across all target schools. Workshops may present opportunities to collaborate with larger numbers of school staff, but these sessions would have to be offered with some frequency if they were to reach a significant number of staff within each school. In short, Upward Bound projects' multifaceted activities with target schools are likely to affect target schools unevenly, having an impact on a very limited number of staff within most schools.[10] This state of affairs is likely to continue as long as projects serve fairly large numbers of schools.

The preceding discussion implies that, if Upward Bound worked with fewer target schools, projects could have more extensive involvement with a larger number of school staff. The student-level and school-level benefits resulting from increased interaction and a larger "presence" of the Upward Bound project in target schools remain largely unsubstantiated, however. To date, data from the student impacts component of the ongoing evaluation have not indicated that Upward Bound students attending schools in which project and school staff are more involved accrue additional short-term benefits from this relationship. While future data about longer-term results may reveal such a relationship, these student centered data will not inform the question of school-wide effects.

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[10] Arguably, the longer a project works with a specific target school, the more faculty with whom it will come into contact. Yet while many grantees have been affiliated with their target schools for a number of years (on average, projects have worked with 60 percent of target schools for over 10 years), these older projects tend to be spread across a larger number of target schools.

The major support for a positive relationship between school-specific outcomes (that is, where non-Upward Bound students also benefit) and increased levels of project involvement with target schools comes from reports of school liaisons about Upward Bound's spill-over effects. Survey findings indicate that in schools where staff are involved in Upward Bound functions in addition to recruitment school staff are more familiar with Upward Bound, and liaisons in the schools report a larger range of spill-over effects (that is, effects in areas such as parent involvement, staff expectations, instructional strategies, curriculum, staff development and school reform). Although these responses suggest that involvement results in broad benefits for the school, this finding is weakened by a potential "halo" effect: staff in schools that are closer to Upward Bound are probably predisposed to perceive a range of positive results.

Besides lacking in strong evidence about specific benefits for target schools and Upward Bound students, initiatives seeking to increase involvement between projects and schools through reductions in the number of target schools served by a project may not be very feasible. The tendency for projects to designate all or most schools in a geographic area as target schools is deeply embedded in practice. Disrupting services to existing schools would not be politically feasible. Furthermore, new projects or projects that have not existed very long would also, over time, confront several pressures when they select target schools. These include giving all needy students in the community equal access to Upward Bound and ensuring that the host institution does not appear biased toward specific neighborhoods or schools. Requiring projects to ignore these pressures may be difficult and not altogether prudent in light of the need for ongoing community support for projects.

VI. UNMET NEED AND STUDENT DEMAND FOR UPWARD BOUND EXCEED CAPACITY

Even with the heightened emphasis on academic instruction, the significant year-round demands of Upward Bound on students' time, and the availability of other precollege programs, considerably more students are eligible for and seek to participate in Upward Bound than can be served. Communities now unserved by Upward Bound projects represent the largest amount of unmet need. Moderately high levels of unmet need also are evident in the schools currently served by projects, but the magnitude of this need is highly sensitive to students' willingness to apply for Upward Bound.

Need and actual demand for service are precarious concepts to measure, especially with respect to the Upward Bound program. And while it is useful to consider the concepts at both the national and the target-school level, each presents measurement difficulties. Estimates of need at the national level can be generated using two of the eligibility factors defined in federal regulations: low-income status and first-generation status. An additional factor--demonstrating need for academic support--cannot readily be estimated given the range of meanings ascribed to this criterion.[1] National estimates of need are imprecise for two other reasons related to students' actual demand for services. There are no data that can be used to account for eligible students whose needs are met as the result of receiving assistance from precollege programs other than Upward Bound. Similarly, there is no way to adjust for students' coming forward to seek precollege assistance.

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[1] There are a total of three major eligibility factors to contend with: low income (that is, income below 150 percent of the official poverty line), first-generation college (neither parent completing a four-year degree), and academic need. The most appropriate source of data for estimating need at the national level is the Current Population Survey (CPS) conducted each year by the Census Bureau. The October CPS contains information on first-generation status. The income data from the October Supplement, however, are categorical. Consequently, individuals' incomes can only be implied. Poverty estimates traditionally are drawn from the March Supplement, which lacks first-generation measures. A second data source, the National Education Longitudinal Survey (NELS), contains relevant data but is restricted to a cohort of students enrolled in eighth grade in 1988. Use of the NELS cohort data over time would entail several questionable assumptions and for this reason was rejected as a basis for calculating the number of students eligible for Upward Bound.

Many of the weaknesses in estimating need at the national level can be overcome by examining need in target schools through numbers of applicants or estimates from school staff. For example, services from other precollege programs and local eligibility criteria can be taken into account. Also, school staff can incorporate qualitative considerations of the actual demand for Upward Bound programs among eligible students into their estimates.

A. NATIONAL MEASURES SHOW A LARGE UNMET NEED FOR UPWARD BOUND SERVICES

The fraction of all students or schools served by the Upward Bound program represents the flip side of unmet need. While estimates of the target population served vary according to the basis on which the estimate is made, one conclusion is inescapable: the program currently reaches a very small fraction of eligible students. Two estimates of the eligible population served by Upward Bound across the nation are the source of this conclusion.[2]

- ***Student-Based Estimate***. Less than 1 percent of all youth who are of an age that usually reflects enrollment in grades 8-12 and who are income-eligible for Upward Bound are served, according to March 1992 census data and Grantee Survey data (Waldman et al. 1995).

- ***School-Based Estimate***. Upward Bound serves students in 8 percent of the nation's schools with grade 8 or above. The approximately 4,000 schools that make up this group enroll about 22 percent of the students in grades 8 through 12 nationwide. When estimates are based only on high schools, Upward Bound serves approximately 18 percent of schools in the nation.

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[2] The estimates cited include grades 8 through 12. Although Upward Bound projects focus on students in grades 9 through 12 (the regulations stipulate that eligible students are those who have completed 8th grade), waivers allow younger students to be served--and projects report serving a small number of such students--in communities with high dropout rates.

These estimates overstate the unmet need for Upward Bound services. Clearly, not all youth who meet the low-income first-generation college criteria will necessarily meet the third requirement of academic need, nor will all these youths necessarily be inclined to enroll in Upward Bound. Furthermore, not all schools are in a geographic area that would qualify the school for services through an Upward Bound grant.[3] Nevertheless, even if these estimates were tripled (that is, if the program served three times as many students or schools), there would still be considerable unmet need in terms of unserved schools or low-income students.

A large fraction of unmet need grows out of the fiscal reality that only a certain number of Upward Bound grants can be made. Based on the figures cited above, about 78 percent of secondary students in the nation attend schools where there is no link to Upward Bound, and the eligible students attending these schools therefore have no opportunity to participate in the program. Not surprisingly, students' chances of receiving assistance from Upward Bound differ depending on geographic location and other characteristics of the schools they attend. Even among the types of schools that are more likely to have access to Upward Bound, however, a considerable fraction of these schools remains without access. For example, the school penetration rates presented in Table VI.1 indicate only one category where Upward Bound reaches more than one-quarter of the schools (the exception is the 38 percent of schools that are Upward Bound target schools and have a student body that is more than 50 percent African American). Strikingly, only one-fifth of the schools with a high concentration of poverty (that is, schools with 40 percent or more of students eligible for free or reduced-price lunches) are served by Upward Bound projects, and only 8 percent of rural schools are served.

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[3] Grant applicants must show evidence that the geographic areas that they propose serving are disadvantaged in terms of income, educational attainment levels, school dropout rates, college attendance rates, school student/counselor ratios, and unaddressed academic, social and economic conditions.

TABLE VI.1

PERCENTAGE OF SCHOOLS WITH AN UPWARD BOUND PROGRAM, BY SCHOOL TYPE

Type of School	Penetration Rate (% of all schools served by Upward Bound)	National Distribution of Schools with Grade 8 and Above (%)	National Distribution of Target Schools (%)
Upward Bound Target Schools	8	N.A.	100
Control			
Public	11	65	97
Private	1	35	3
Grade Level			
High School	18	51	79
Middle/Junior High	5	49	21
Location			
Urban	17	41	60
Rural	8	59	40
Free Lunch Eligibility			
0 - 19	7	48	30
20 - 39	13	30	32
40 - 100	20	22	39
Predominant Race/Ethnicity			
African American	38	9	28
White	7	79	49
Asian	22	1	3
Native American	22	1	3
Hispanic	16	5	8
Mixed	24	5	10
School Enrollment			
1 - 299	3	33	10
300 - 749	9	38	32
Over 750	23	29	59

SOURCE: Target school data are from the 1993 Survey of Upward Bound Target Schools. National school data are from the 1990-91 Schools and Staffing Survey and the Common Core of Data Public School Universe, 1991-92, both collected by the National Center for Education Statistics.

NOTE: High school is defined as any school with grade 10 or above, middle schools are schools with at least grade 8 but no grade higher than 9. The predominant race/ethnicity of a school is based on at least 50 percent of the students in a school being reported as of a specific race or ethnic group. The exception is Asian, for which only 25 percent of the students must be reported as Asian for the school to be so classified.

B. TARGET SCHOOLS REPORT A LARGE UNMET NEED FOR PROGRAM SERVICES

Both project directors and target school liaisons confirm that there are more students in target schools eligible to enter the program than there are openings. Most project directors reported that they had at least two applicants for every opening in 1992-1993, whereas reports from the target schools indicated that, for every student participating in Upward Bound, about five additional students were not served by any other precollege program and met the Upward Bound eligibility criteria.

These estimates of unmet need from target schools offer a better approximation of potential demand than do those based on program applications. Because project administrators usually manage the application pipeline in order to limit burden on students and themselves, the actual number of applications that projects receive invariably underestimates need.[4] Estimates from the target schools, although subject to imprecision, offer two key advantages: (1) they account for students receiving services from another precollege program, and (2) they reflect the local eligibility criteria that projects use when identifying students who exhibit need and are most likely to benefit from Upward Bound services. What estimates from target schools fail to take into account, however, is the extent to which need for services among eligible students will actually translate into demand (that is, students would in fact apply and enroll).

1. Alternative Precollege Programs Do Not Eliminate Unmet Need in Target Schools

One or more precollege programs in addition to Upward Bound operates in 70 percent of target schools. Given the ubiquity of other precollege programs, however, target school liaisons still reported that five times as many students who entered Upward Bound were eligible for but were not receiving other precollege services. It is conceivable that school liaisons would have reported even larger numbers of Upward Bound-eligible, unserved students if these other precollege programs were not available. It is also possible that alternative precollege programs have a different focus from Upward Bound, resulting in relatively minimal overlap of targeted students.[5] Regardless of the reasons, it appears that alternative precollege programs have not thus far greatly diminished the unmet need for precollege programs.

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[4] Target school estimates were obtained from target school liaisons without reference to the number of students making applications to Upward Bound. In the Target School Survey, liaisons were asked to estimate "the number of students in the school who are eligible for Upward Bound but not participating in any precollege program."

2. Project-Imposed Eligibility Requirements Narrow the Target Population but Still Yield a Sizeable Pool of Eligible Students

While a variety of sources substantiate that Upward Bound projects are selective about the group of students they admit, this selectivity is not so extreme as to produce a small pool of eligible students. Consequently, despite additional eligibility requirements imposed by local projects, target schools report noteworthy levels of unmet need.

According to field visits and the Grantee Survey, most Upward Bound projects today seek to admit low-income students who occupy the large middle ground that lies between outstanding performance and failure in school. Academically, projects select few students with high grades, even though sometimes very low grades are a reason for not admitting students. Evidence from the baseline survey of students who applied to Upward Bound and were judged acceptable underscores these points. The majority of students whom project directors identified for the program had B or C grade point averages in 9th grade (Figure VI.1).[6] Projects exhibited a tendency not to accept students with a D average or

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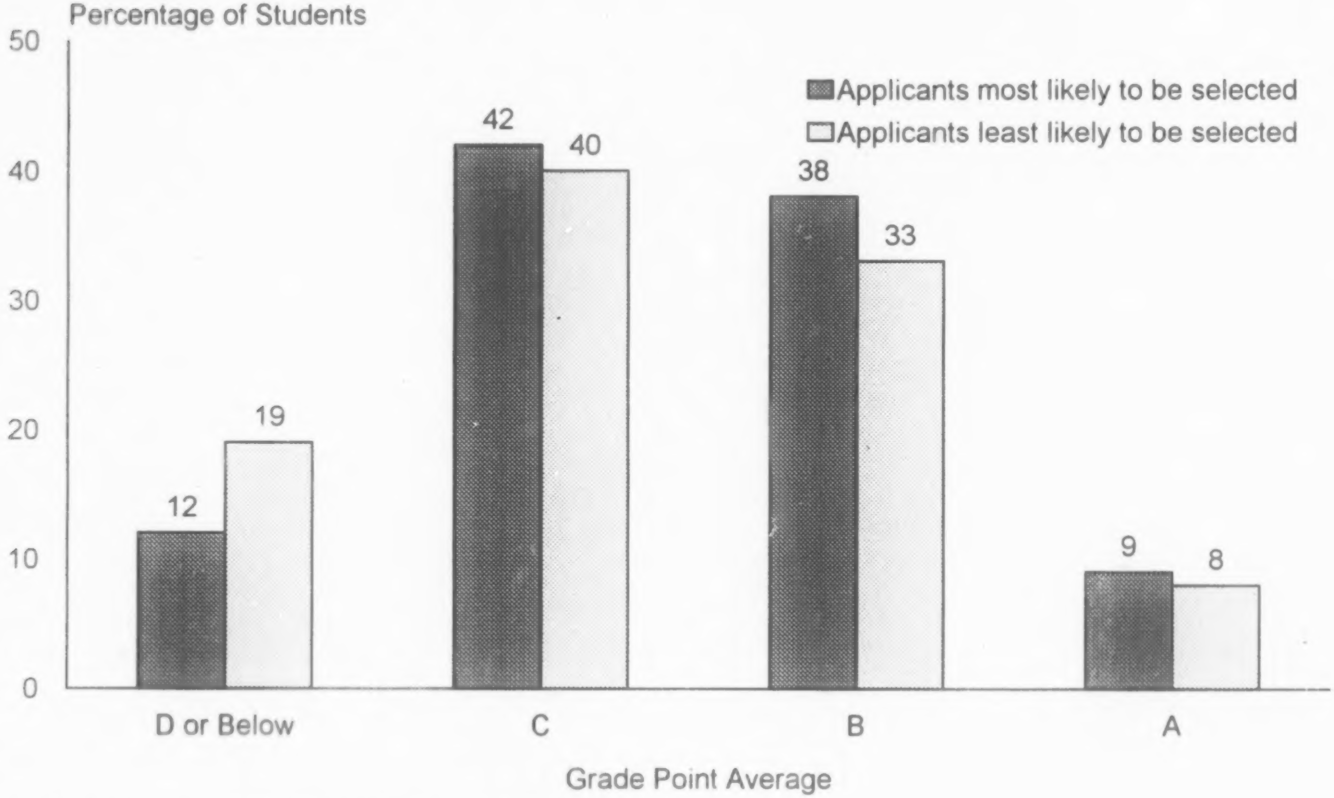
[5] Liaisons indicated, however, that other precollege programs in the target schools typically addressed a student population that is fairly comparable to Upward Bound students.

[6] The results in Figure VI.1 are computed from 9th grade transcripts obtained for Upward Bound applicants in the component of the on-going evaluation assessing Upward Bound's impacts on students. These students applied to the sample of 67 projects comprising the impacts study. The calculations are restricted to students whom project staff indicated they would be most likely and least likely to accept into Upward Bound if the project was not participating in the random selection study design. The grade point averages also are necessarily limited to those students who entered Upward Bound after the 9th grade. Analyses have shown that other characteristics of these students do not differ systematically from those of the younger group of applicants.

FIGURE VI.1

UPWARD BOUND APPLICANTS' GRADE POINT AVERAGE IN 9th GRADE [a]



SOURCE: Student Impact Study Baseline Survey, 1993-1994

[a] Calculated for applicants who had finished 9th grade

below. Most projects also reported that they sought to select students with a positive attitude toward education and the ability to avoid negative behaviors. Accordingly, the majority of projects usually screened out students who exhibited little motivation to attend college and who had a history of disciplinary actions or problems with substance abuse or gangs.

3. Unmet Need Does Not Fully Translate into Student Demand for Upward Bound Services

The size of the pool of eligible, unserved students in target schools is highly influenced by student behavior. On the one hand, 2-to-1 ratio of applications to openings suggests that Upward Bound carries considerable appeal for students. However, when the ratio is compared against target school indications of unserved eligible students, it suggests that a significant number of eligible students neither apply nor seek to participate. In fact, liaisons in the target schools cited failure to apply as the overwhelming reason that these students did not become Upward Bound participants. The reasons why eligible students do not apply or do not participate in Upward Bound help to uncover the ephemeral component of unmet need.

- Anticipation of rejection and a lack of awareness about the program were cited by target school liaisons as reasons that eligible students did not participate in Upward Bound (one-quarter and one-third of liaisons listed these as a moderate or major reason). Generally speaking, it is reasonable to assume that both of these problems could be overcome if more openings were available in Upward Bound projects and recruitment strategies were expanded.

- Unwillingness or inability to commit the time and effort to Upward Bound also appear to be reasons for some students not participating in the program. Almost one-quarter of liaisons indicated that a major or moderate reason for students not enrolling in Upward Bound was the students' decision to decline acceptance.

- Males--particularly in African American dominant projects--are clearly less inclined to apply. This observation is consistent with observations in the popular press that African American males of this age appear much more susceptible to pressures to avoid being identified with academic accomplishment.

The upshot of this picture of unmet need within target schools is that such need clearly exists, but its size is extremely difficult to quantify. Projects dipping into the pool of eligible, unserved students to replace those who elect to leave Upward Bound, an issue discussed in the subsequent chapter, complicates assessments of the extent of need in target schools even further. Unmet need in target schools raises an important policy question--whether the federal government should give priority to addressing these needs or to serving schools that currently are not Upward Bound target schools.

Based on information about federal funding trends presented in Chapter II, it appears that ED recently has followed the course of using its increased funds to start new projects rather than to expand existing projects and thus enable them to serve more students within existing target schools.[7] It should be noted that these choices are not mutually exclusive. The federal government could address both sources of unmet need; existing projects could be expanded to serve more students in target schools and new projects could be funded to address eligible students in unserved schools. In deciding these matters, however, the determining factor should not be so much the size of the unmet need within served and unserved schools as the relative costs and effectiveness of expanding the size of current projects versus opening new projects. While the analysis of project cost in the field sites indicates that economies of scale may make it less expensive to increase the size of small existing projects than to add new projects, the relative effectiveness of different size projects is still to be resolved and addressed in future reports on program impacts.[8]

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[7] The average enrollment of Upward Bound projects has remained quite constant over recent years while the number of grantees has increased (see Figure II.2).

[8] The 20 field sites produced results indicating that per student costs in medium-sized projects (defined as those with between 66 and 84 students) were lower than those in smaller (65 or fewer students) and larger (85 or more students) projects. For these sites, economies of scale were influential in reducing per student costs as project size increased from 60 to 85 openings. After reaching 85 openings, average cost per student began to rise, with no further economies of scale.

VII. PROJECTS REPORT HIGH COLLEGE-GOING RATES YET EXHIBIT LOW RATES OF STUDENT PERSISTENCE

Students' persistence in Upward Bound and their enrollment in college are critical outcomes on which all grantees focus.[1] Previous evidence shows that these outcomes are closely linked--the longer students participate in Upward Bound, the more likely they are to enroll in college. Federal rules require projects to report data annually through the federal performance reports that measure several dimensions of program performance, including the program persistence and college enrollment of 12th graders in Upward Bound. Projects are held accountable for demonstrating satisfactory performance on these outcomes as part of ED's assigning priority points in the cyclical grants competitions.

This chapter reviews the information that projects reported regarding persistence and college enrollment, and contrasts these reports of persistence with those obtained by tracking students through their first year of Upward Bound.[2] The results show that Upward Bound projects record very high levels of college enrollment among students who graduate from the program. The estimated college-going rate for graduates of Upward Bound projects in the Grantee Survey was 86 percent. Despite this impressive figure, however, recent evidence from the longitudinal survey of students estimates that a troubling number of students--37 percent--drop out in the first year of Upward Bound (Myers and Schirm 1996). Thus, reported rates of college enrollment represent only a portion of the students who enroll in Upward Bound.

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[1] Other key objectives of the Upward Bound program are enabling students to graduate from high school and to succeed in a program of postsecondary education. The trend over the past 20 years has been for a very high percentage of Upward Bound students to complete high school--above 95 percent for students in Upward Bound during the last two or three years of high school, according to the RTI evaluation (Burkheimer 1979). This is not surprising given the more motivated students Upward Bound typically recruits. Success in postsecondary education, while a key objective of Upward Bound, has generated greater controversy as an outcome for projects measured. ED's most recent regulations now include a clear emphasis on grantees' documentation of the college persistence and completion of program graduates as well as those "scheduled to complete the program" as a factor in the award of priority points. To date, however, grantees have not been explicitly told to report such data in the annual performance reports. The dispersion of students across postsecondary institutions and discontinuities common to students' postsecondary participation generally have been seen as major impediments to the effective tracking of students.

[2] The estimates reported here were not obtained directly from items in the Annual Performance Reports. Grantee Survey data proved much more accessible and accurate as a result of checked data than the Annual Performance Reports submitted to ED. For example, reports from two consecutive years would be necessary to estimate persistence rates using the performance reports. Moreover, students' longitudinal persistence as measured by the survey of students offers a much more informative measure of student persistence than the cross-sectional data contained in the performance reports.

The relatively low persistence level, if sustained in future years, has two implications. First, the sizable drop-out rate implies that the average Upward Bound student is likely to spend less time in the program than the full three to four years envisioned in the basic Upward Bound design. Second, low persistence suggests that projects may need to consider strategies to minimize dropping out, since student turnover thwarts the cumulative benefits of the program and fails to capitalize on the program's initial investment in each student. Future reports from the national evaluation of Upward Bound will continue to address these issues with additional data related to the long-term persistence of students and will examine whether some portion of Upward Bound service has any detectable impact on students. Nevertheless, it is useful in this report to highlight what has been learned so far about student persistence.[3]

A. STUDENTS' LOW RATES OF PERSISTENCE IN UPWARD BOUND PROJECTS

Upward Bound projects, while clearly appealing to a large group of applicants, face considerable challenge in retaining these applicants once they are selected into the program. Based on information obtained through the longitudinal survey of students, a noteworthy fraction of selected students--one-fifth--do not follow through to even begin the Upward Bound program. Among those who do, close to two-fifths are projected to leave the program in their first 12 months of enrollment (Figure VII.1).[4] Somewhat surprisingly, when project directors were asked to indicate when most non-completing students left Upward Bound, the large majority did not identify the first few years after students enter (that is, 9th and 10th grades) but instead indicated the spring of students' junior year.[5] Project directors' perceptions of the fall-off in participation after junior year are confirmed by the fact that 12th grade participants constitute a much smaller fraction of Upward Bound students (one-fifth) than do students from either the 10th or 11th grades (each of these grades, on average, accounts for about one-third of all participating students) (Fasciano and Jacobson 1995). If junior year is the most vulnerable time for leaving, and if first-year patterns of dropping out persist into future years, attrition among students initially selected for Upward Bound may be quite substantial by the end of high school and a cause for concern.[6]

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[3] Ultimately, information about college-going rates for all students who enroll in Upward Bound and not simply those who continue will be available from the ongoing impact study. Furthermore, these rates can be compared with those of a randomly selected group of students who did not participate in Upward Bound to obtain an unbiased measure of the program's effectiveness.

It is difficult to gauge how grantees are affected by these fairly striking attrition rates and whether departing students create any unique problems for projects. Attrition certainly has not made grantees reluctant to hold students accountable for meeting satisfactory levels of performance. Almost all

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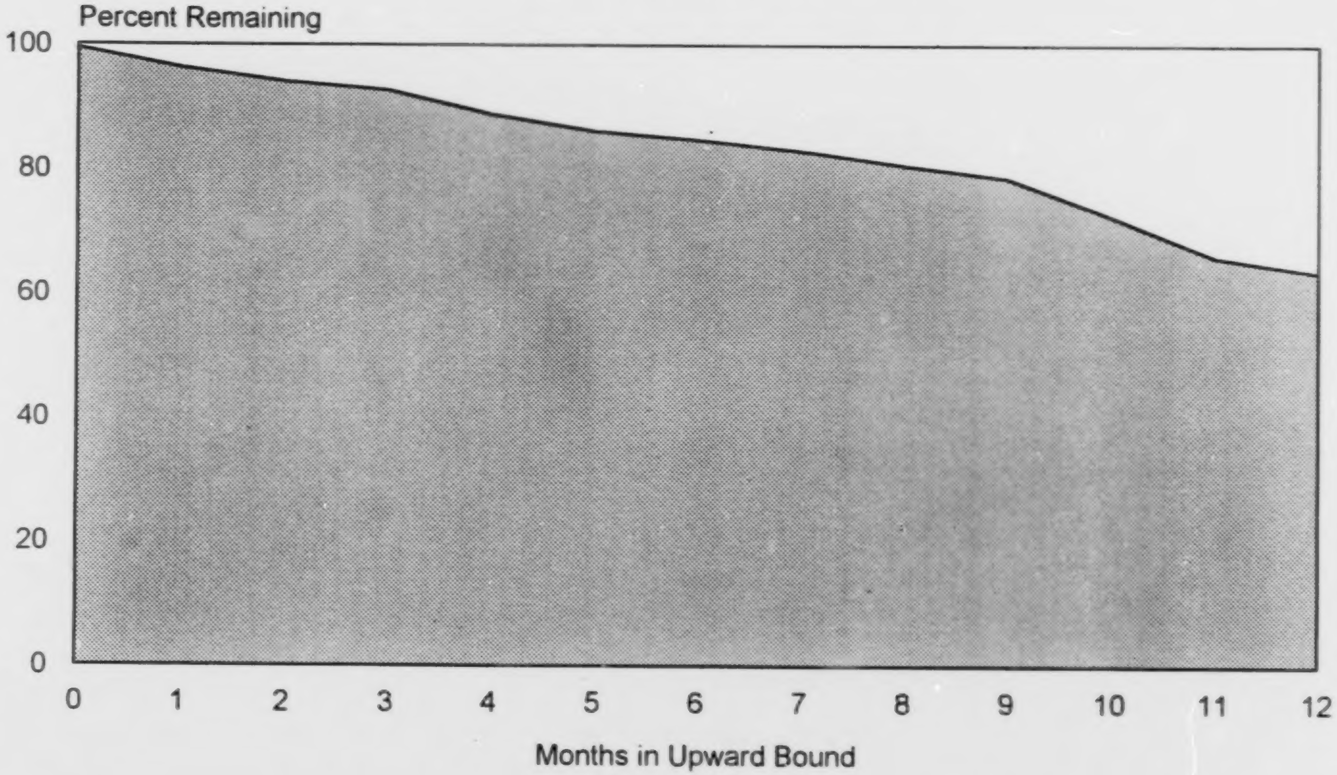
[4] The projections, discussed in Myers and Schirm (1996), do not follow all students for the same amount of time; instead, they recognize that due to different selection dates, some students had an opportunity to participate in the program for less than 12 months. The projections are adjusted for this difference.

[5] Grantees could select more than one grade as a time when students are most likely to drop out of Upward Bound. Sixty-nine percent selected the 11th grade. The 10th and 12th grades were chosen by approximately 33 percent of grantees, and 11 percent picked the 9th grade (Fasciano and Jacobson 1995).

[6] A 1982 GAO study of 12 projects indicated that 50 percent of the students who originally entered Upward Bound dropped out of the program before graduating from high school (GAO 1983).

FIGURE VII.1

STUDENT PERSISTENCE IN UPWARD BOUND FOR 1993-94 ENTERING COHORT



SOURCE: Student Impact Study, Participation Survey 1994

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projects employed at least one performance or behavioral standard on which students' continuation in Upward Bound depended and many used several.[7]

Furthermore, projects appear to rely on several well-developed mechanisms to minimize possible negative effects of student attrition on program operations. For example, most projects routinely accept a larger number of applicants than the number of openings, and many form waiting lists with the expectation that some accepted students will not enroll. Furthermore, to the extent that they can integrate new enrollees into the program, many projects replace students who drop out during the year--a practice made more feasible by waiting lists and year-round admissions policies.[8] These strategies may explain why almost all projects visited in the field considered their drop-out rates to be low and why projects generally were able to operate near to, or at, full capacity.

Although projects have been able to compensate for the effects of student attrition on program operations, dropping out remains problematic from the perspective of ensuring the full benefit of Upward Bound's investment in students. Moreover, there is evidence to indicate that during the first year of Upward Bound, students with low educational expectations are among those most likely to drop out, yet these students may benefit the most from the program in terms of gains in academic course credits (Myers and Schirm 1996).

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[7] Two-thirds of projects used four or more standards to determine students' continuation. The standards ranged across the categories of attendance, academic performance, and discipline. With the exception of discipline, projects applied the standards primarily to students' performance within Upward Bound rather than within their regular school.

[8] Two-thirds of the projects in the Grantee Survey reported that they accepted students during both summer and academic-year sessions and did not restrict admissions to a single period.

Jobs have consistently emerged as the most common reason behind the decision to drop out of Upward Bound (Fasciano and Jacobson 1995, Waldman et al. 1996, and Myers and Schirm 1996).[9] Reducing the levels of attrition among students may require the incorporation of work opportunities or compensated community service into Upward Bound, or at the very least, program schedules that can accommodate students who hold jobs.[10] Evidence from the field study focus groups with Upward Bound participants suggests that stipends, while appreciated, were not viewed as a significant incentive to enter or remain in Upward Bound.

B. COLLEGE ATTENDANCE PATTERNS OF GRADUATES OF UPWARD BOUND

A full 86 percent of students who complete the full regimen of an Upward Bound program go on to enroll in a two- or four-year college program according to grantees' reports (Figure VII.2). This figure exceeds the 81 percent college enrollment rate of Upward Bound completers reported 20 years ago by the RTI evaluation (Burkheimer 1979). It also surpasses the 62 percent college enrollment rate for all high school graduates nationwide and even the 79 percent rate attained by graduates from families with incomes in the top 20 percent (Figure VII.3).[11]

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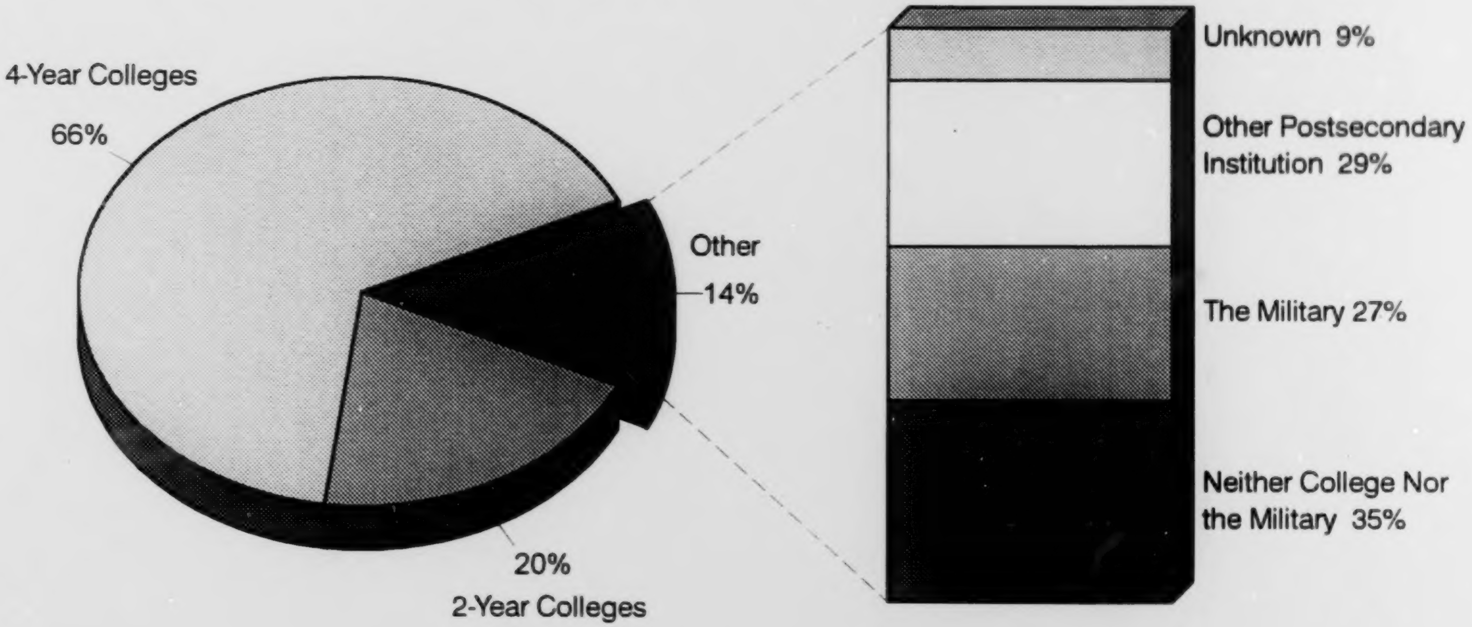
[9] The relationship of various project characteristics (for example, the dominant focus, the curricular type, size, two and four-year status of host, project location) generally were non-existent or inconsistent when controlling for other characteristics. At this point, one can only safely conclude that while the level of persistence varies across projects, there is no systematic pattern to this variation. More specifically, choices in curricular focus (for example, a math/science curriculum or an enrichment focus) appear unrelated to low persistence.

[10] As noted in Chapter IV, only half of the projects currently provide work assistance in the summer, and less than one-fifth do so during the academic year.

[11] Using NELS88 data, a comparison group of low-income students with similar educational expectations as students who applied for Upward Bound was constructed as part of the national evaluations' student impact study. About 62 percent of these low income students attended college; clearly, less than the 86 percent reported by Upward Bound grantees.

FIGURE VII.2

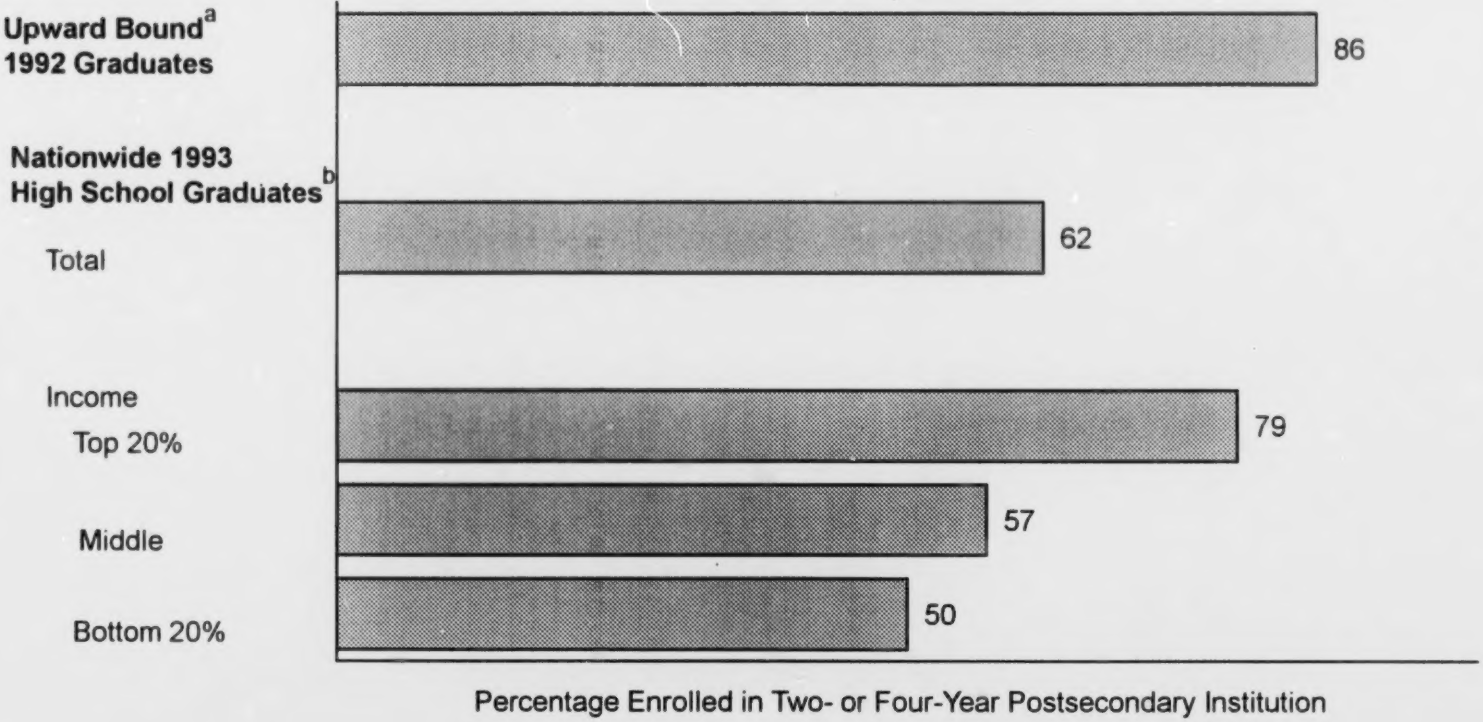
WHERE UPWARD BOUND GRADUATES GO
(Mean Percentage of Upward Bound Graduates, by Grantee)



SOURCE: Grantee Survey

FIGURE VII.3

COLLEGE ENROLLMENT RATES FOR UPWARD BOUND GRADUATES AND GRADUATES NATIONWIDE



[a] Fasciano and Jacobson 1995

[b] Smith et al. 1995 Condition of Education. Based on Current Population Survey, high school graduates enrolled in college the following October.

These comparisons can be misleading for at least two reasons. First, the Upward Bound estimate of college attendance is based on grantees' questionnaire responses regarding enrollment results for 1992-1993 graduates. It is not based on data directly obtained from the graduates, as the other estimates are. Second, even comparisons using a similarly disadvantaged group of students are problematic, since student attrition is likely to enlarge the differences between comparison students and participants as Upward Bound students become program graduates. Thus, while the 86 percent college enrollment rate achieved by projects may appear compelling, one cannot at this stage dismiss the possibility that Upward Bound participants represent a group of students who, independent of Upward Bound, exhibit an equally high level of college-going.

A much larger share of Upward Bound graduates enters four-year colleges than two-year colleges--66 percent versus 20 percent.[12] While the two-year college enrollment rate is much lower than the four-year rate, it has increased since the 1970s when only 13 percent of Upward Bound graduates went on to two-year colleges. The increased representation of two-year colleges among Upward Bound host institutions (19 percent in the current Grantee Survey compared with 8 percent in the RTI evaluation) is undoubtedly a factor behind the growth in the two-year college enrollment rate of Upward Bound graduates, since the Upward Bound host institution is associated with the schools students choose.

Students appear inclined toward enrolling in either a two-year or four-year college depending on the type of host institution in which they attended Upward Bound. Whether students choose the Upward Bound program as a function of their inclination toward a specific type of college, or whether their experience in the host institution shapes the direction they choose, most students go on to the same type of college (Figure VII.4). Four-year hosts appear to exert much more influence on the type of college students select, with 73 percent of graduates going to four-year colleges and only 14 percent going to two-year schools. There is more balance in the two-year host institutions' apparent influence over enrollment patterns of graduates: 44 percent of graduates from two-year-hosted projects attend two-year colleges compared with 38 percent attending four-year colleges.

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[12] Inevitably, questions arise regarding whether specific project characteristics are linked to higher rates of overall college enrollment. Higher levels of college enrollment, however, do not necessarily equate with projects' effectiveness in enhancing college-going opportunities for youths, since it is not possible to fully account for differences among the students served by different projects. While a few patterns have emerged in analyses of the grantee-reported data (for example, being a four-year host, having a large enrollment, and exhibiting lower ratios of students to FTE regular staff), these patterns are only suggestive and are yet to be tested with outcomes data from the longitudinal student impacts study (see Fasciano and Jacobson 1995).

The potential imprinting of the host institution extends beyond the type of postsecondary school that students enter to enrollment in the host institution itself. A noteworthy proportion of students in Upward Bound--over one-third--are estimated to enroll in the host college. This estimate is lower than the 53 percent of students whom the earlier RTI evaluations reported as enrolling in their Upward Bound host institution (Burkheimer et al. 1979).[13] However, it is almost identical for two-year- and four-year-based projects (Figure VII.4). A basic distinction exists, however, in host enrollment patterns between two and four-year institutions. The vast majority (over four-fifths) of Upward Bound graduates from projects at two-year hosts who enroll in two-year colleges will enter the Upward

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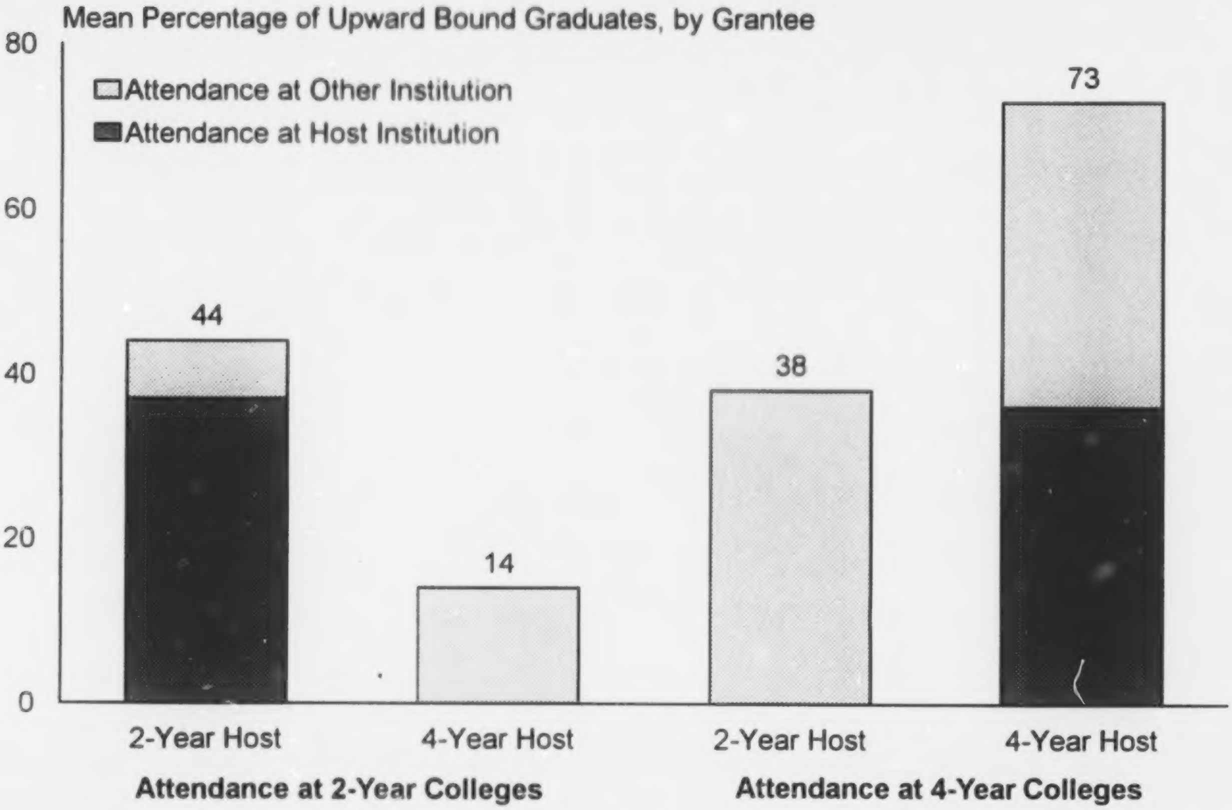
[13] The methods of estimating the average percent of Upward Bound students enrolling in the host institution varies between the RTI study and the grantee reported data used in this report. Grantees were asked to indicate, by range, the number of program graduates who attended the host college. Two-thirds of projects, reported that between 3 and 10 such students typically enroll in the host college each year (Fasciano and Jacobson 1995). To compute the average percentage, each grantee's response was set to the midpoint of the range and divided by the total count of graduates going to college. Field visits reveal that one-fourth of the hosts visited offered Upward Bound students incentives of scholarships or fee waivers to enroll. A few offered advanced college credit for successful completion of Upward Bound or college courses; similarly a few relaxed admission standards for Upward Bound students. These actions were irrelevant to almost half of the sites visited, however, since these schools had open enrollment policies.

FIGURE VII.4

COLLEGE ATTENDANCE PATTERNS OF UPWARD BOUND GRADUATES, BY TYPE OF HOST INSTITUTION



SOURCE: Fasciano and Jacobson 1995

Bound host institution, whereas only half of Upward Bound graduates from four-year hosts who go on to four-year schools will enter the host. Regardless of these differences, however, these host enrollment patterns suggest that, for about one-third of their graduates, Upward Bound projects have a good opportunity to remain in touch with students during some of their postsecondary years.

C. PROVISION OF POSTSECONDARY TRANSITION SERVICES AND TRACKING PROGRESS AMONG PROGRAM GRADUATES

Success in college constitutes an important objective of Upward Bound, yet projects do not invest any appreciable resources in providing postsecondary transition services to former students once they enroll in a postsecondary institution. Although the previous RTI evaluation had encouraged the development and adoption of models of effective transition assistance (Burkheimer 1979), projects in the field studies were found to focus mainly on motivating and preparing students to enter college--more immediate objectives that project staff perceived they could directly influence and that there was clear regulatory authority to pursue.[14]

Short of direct services to enrolled college students, however, Upward Bound projects do have opportunities to assist the transition of graduates into the first year of college--either through transition-focused services that occur prior to the students' formal enrollment (but are in addition to the summer bridge services) or by coordination with college assistance programs in the institutions enrolling the graduates. Even so, the field visits indicated little evidence of projects' systematic provision of these services. Projects exhibited little involvement, for example, in increasing the articulation between summer bridge courses and courses at receiving institutions or in connecting students with assistance programs for disadvantaged students at other colleges (for example, the TRIO Student Support Services [SSS] program). Not surprisingly, this connection was more likely to be made for students attending the host institution.[15]

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[14] The summer bridge programs provided by the vast majority of projects prior to a graduate's enrollment in college in the fall do not constitute the type of transition services referred to as a regulatory issue in this section. At issue is the Upward Bound regulations' failure to explicitly authorize providing transition services directly to students once they formally enroll in college. The recently issued regulations covering the 1995 grants only specify the need for a "follow-up plan for tracking graduates of Upward Bound as they enter and continue in postsecondary education" (Sec.645.31.b.10).

A number of projects appear to track the progress of Upward Bound graduates in postsecondary schools in some form. For example, just over half of the projects in the field studies indicated that they went beyond the short-term follow-up necessary to report the annual performance data pertaining to the number of graduates enrolling in postsecondary education. Among those that track for longer periods, however, the effort is often informal and unsystematic, with projects sending postcards or making a personal effort to stay in touch.

Other than persuasive reasons for instituting transitional assistance, there is no current evidence to indicate that these services are effective or appropriate for Upward Bound to provide. Nevertheless, to the extent that Upward Bound projects construct an academically oriented, supportive group of peers and adults around participants during the course of high school, it appears a reasonable step to help graduates find a similarly focused and supportive set of associations in college. Efforts to engineer an effective transfer of the graduate to the postsecondary context remain largely underdeveloped within Upward Bound.

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[15] Approximately 68 percent of Upward Bound projects are located in postsecondary schools with an SSS program.

VIII. UPWARD BOUND PROGRAM OPERATIONS: AN OVERALL ASSESSMENT

In this report, two underlying questions have guided the examination of the current operations of Upward Bound projects:

- How have the operations and services provided under the Upward Bound program changed?
- Are Upward Bound programs operating in ways that are likely to yield the college-related outcomes for disadvantaged students that the Upward Bound legislation seeks to achieve?

This chapter draws upon previous chapters to broadly summarize the evidence regarding these two questions. The chapter then examines areas where existing research suggests that Upward Bound programs might improve upon current practice and lays out questions that future reports from the national evaluation will address as part of the long-term student impact analyses. The chapter concludes with a discussion of several issues for federal policymakers to consider in proposing changes to the program. Specifically, the chapter raises the possibility of allowing a portion of Upward Bound projects to experiment with a wider array of program designs. Such experimentation could uncover precollege service mixes that either (1) increase the effectiveness of current approaches to Upward Bound services or (2) require fewer resources per student to achieve the same level of outcomes that current approaches do. Discovery of a more efficient mix of services is relevant to the issue of how to maximize resources to serve students currently unserved within the Upward Bound target population without compromising effectiveness.

A. HAVE UPWARD BOUND PROJECTS CHANGED?

The 1970s are a benchmark useful for measuring changes in Upward Bound largely because they mark the last major evaluation of the program (Burkheimer et al. 1979). Since then, a large number of precollege programs other than Upward Bound have emerged across the country. Also, broad-based educational reforms have attempted to improve the instructional program in the nation's schools in response to concerns that students' academic performance improve to meet the challenges of the future economy. Against this backdrop of changes, the core elements and underlying strategies of Upward Bound programs have remained largely intact over the past two decades. Projects have uniformly adopted the programmatic elements that compose the Upward Bound blueprint--a comprehensive package of multi-year services that includes instructional assistance, counseling, exposure to college life, and cultural enrichment.

The institutionalization of the core components of Upward Bound has not occurred independent of policy inducements. Two key levers at the federal level played a major role in furthering consistency in both young and old projects: (1) provisions that give priority to the continuity of Upward Bound services by favoring repeated funding of the large majority of grantees and (2) the evolution of fairly well-specified legislative and regulatory requirements to govern program operations. The combined effect of these levers--and of federal appropriations before the 1990s that resulted in generally level funding in terms of constant dollars--reinforced projects' adherence to the basic Upward Bound blueprint.

The Upward Bound program, however, has not been impervious to changes in the surrounding environment. Two particular changes in Upward Bound operations are especially significant in terms of the program's intended effects on students. First, the academic thrust of Upward Bound instruction has intensified noticeably compared with 20 years ago. Second, the representation of two-year colleges among Upward Bound host institutions has increased, particularly in the past five years. The heightened academic thrust of programs reflects the widespread impetus to emphasize improved skills in the traditional academic domains. Furthermore, it is quite possible that the growing presence of other precollege programs has pushed Upward Bound projects to differentiate themselves in terms of academic intensity. And the presence of more two-year colleges among Upward Bound host institutions is a development that is congruent with the dramatic expansion of these schools' enrollments in the past few decades. The magnitude of these changes and how they are likely to affect the program and its outcomes are discussed below.

1. Increased Emphasis on Students' Academic Preparation

Although no single measure can describe precisely how much more academically intensive Upward Bound projects have become over the past 20 years, a number of indicators support the conclusion that the program now gives more attention to academic instruction. For example, projects in the 1990s offer more courses than they did in the 1970s, and most of these courses focus on subjects traditionally associated with a strong college preparatory program--writing, reading, geometry, algebra I and II, chemistry, biology, and precalculus. A very high percentage of projects require that students complete at least six academic courses offered through Upward Bound, and many projects require students to take even more courses in the math and science domains in order to complete the program. Equally significant are changes in the nature of instruction. While the previous national evaluation revealed that Upward Bound projects placed considerable emphasis on remedial instruction, the large majority of today's projects have a nonremedial orientation that focuses on paralleling or going beyond the coursework that students undertake in their high school classes.

Furthermore, except for anecdotal reports of fewer travel resources and survey data that show projects providing less work assistance, little fall-off is evident in the range of supportive services provided by Upward Bound projects. These services include personal and academic counseling, cultural activities, field trips to explore other colleges or career fields, and assistance with college applications and obtaining financial assistance. Unfortunately, it is not possible to assess whether the time committed to these activities has been reduced to accommodate more attention to instruction. Nevertheless, one can be reasonably confident that the shift to academics has generally been accomplished while maintaining other forms of service.

The nonremedial, academics-first thrust addresses both a weakness that some observers ascribed to the program based largely on the 1970s description of Upward Bound (Natriello et al. 1990) and other criticisms that have been leveled at many educational programs serving disadvantaged youth. A growing research literature supports the benefits that come from the positive messages conveyed by an instructional approach based on challenge. According to this literature, nonremedial curricula are not only more stimulating to students and enhancing of academic skills but also affirm students' strengths and help them to develop high expectations about what they can accomplish if they apply effort. In terms of the prevailing schools of thought regarding effective ways to promote learning among educationally disadvantaged students, the greater academic intensity of Upward Bound implies that projects today have improved in their ability to develop the academic skills and self-confidence essential to progress and persistence in postsecondary education.

2. Increased Representation of Two-Year Colleges as Upward Bound Hosts

In the early years, policymakers demonstrated a clear preference for funding projects hosted by four-year colleges and universities. This preference reflected the view that four-year degrees should be the primary objective of an intervention aimed at improving postsecondary enrollment and completion rates; two-year colleges and the associates' degree carried overtones of continued educational tracking of low-income students. Consequently, two-year colleges hosted only 8 percent of funded projects in the early 1970s. This pattern failed to change dramatically prior to 1990, fostered by low turnover among existing grantees and few opportunities for federal officials to fund a significant number of new projects.

A 1995 snapshot of Upward Bound grantees, however, indicates that two-year colleges have become a stronger presence in the program, now hosting over one-quarter of the projects in the nation. In fact, grant cycles in recent years have resulted in the award of about half of new grants to two-year colleges, confirming a changed attitude toward two-year schools within Upward Bound. In fact, from 1973-74 to 1995-96 the percentage of all two-year colleges having an Upward Bound program climbed from 2 to 12 percent. The percentage of four-year colleges with Upward Bound rose much less--from 15 to 18 percent (Burkheimer et al. 1979, "The Condition of Education" 1994).

It is important for program staff and the Upward Bound community to anticipate the effects that the increased representation of two-year schools will have on the aggregate long-term outcomes that have traditionally been measured in Upward Bound. For example, the national evaluation results show that Upward Bound students are more likely to enroll in the same type of college as the host institution (and for two-year schools, that often means the host itself). Thus, a higher fraction of two-year colleges as Upward Bound hosts can be expected to generate an increase in the overall percentage of students enrolling in two-year schools and a related dip in the overall percentage of students initially enrolling in four-year colleges. Two-year colleges' increased presence also is likely to reduce the proportion of Upward Bound students who do not participate in a residential program. In 1993, almost 90 percent of all projects offered a residential experience, but this is likely to change in future years because only half of two-year colleges offer such an experience. Whether this change, independent of any other effects of two-year colleges on students, will lead to changes in the long-term impacts of the program remains a question for consideration in future reports from the national evaluation.[1]

B. ARE UPWARD BOUND PROJECTS OPERATING IN WAYS LIKELY TO PRODUCE THE DESIRED POSTSECONDARY OUTCOMES FOR PARTICIPATING STUDENTS?

The strategies and services that are in place in the overwhelming majority of Upward Bound projects appear reasonably structured to yield the types of postsecondary outcomes the program aspires to achieve. Readers must recognize that this assessment is inferentially derived. It is based on comparing what available research says about generally effective educational practices--practices such as increasing time on tasks and removing remedial work drills from the curriculum--with evidence on how the vast majority of Upward Bound projects currently operate. The areas where Upward Bound projects mirror what is considered effective practice include the following:

- The program is stable and consistently implemented, combining academic and support services addressing students' development on multiple fronts.
- There is an emphasis on challenging academic coursework that minimizes remedial work.
- A full calendar year program provides participating students more instructional time--about one-quarter of a regular school year of extra instruction each year, or a full extra year of instruction for students who complete four years in the program.
- Projects identify most participating students in the 9th and 10th grades of high school to permit services early in the high school years and sustained participation throughout high school.
- Students are exposed to project staff who provide racial/ethnic role models of academic success.

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[1] To date, the national evaluation has found no short-term effects of nonresidential programs on students' grade point averages, educational expectations, high school course credits, and continued participation in the program (Myers and Schirm 1996).

- There is an emphasis on students' meeting expectations of progress in academic coursework and responsible self-conduct as a requirement of continuation in the program.

Even with heightened attention to academics, Upward Bound projects' package of academic and support services clearly attracts students. Demand remains high as measured by application rates and by target school personnel who report unmet student demand that occurs because students do not apply because of concern that they will not be selected or simply because they are not aware of the program. From the perspective of enlisting student interest, therefore, Upward Bound projects appear to have attained an important prerequisite for achieving program outcomes.

The level of student persistence, however, is not reassuring of Upward Bound's potential to effect the desired postsecondary outcomes for students recruited to the program. While students may seek to join Upward Bound, the likelihood is low that a large percentage will stay in the program. Estimates from the national evaluation indicate that 37 percent of students who begin the program fail to stay through the first year. This drop-out rate will climb even higher if one accepts the prediction of projects that attrition peaks as students near the end of their junior year of high school when pressures to work become an especially strong influence on students. And while there is little evidence that any specific program factors are systematically associated with continuity in Upward Bound, students who expect to complete fewer years of education clearly are more vulnerable to dropping out within the first year. Since these students are likely to show greater gains from participating in Upward Bound, even during the first year, there is a clear need for projects to investigate strategies that focus specifically on ways to retain these students.

The overall assessment of Upward Bound's likelihood to realize desired outcomes, while positive in some respects, is not entirely so; the program of comprehensive services that projects provide, while closely aligned with recognized research regarding practices that work with disadvantaged populations, is undercut by the difficulty in sustaining the participation of a sizable segment of students. Unlike assessments of the past decade that raised questions about the adequacy of instructional support provided by the program, today's observations of the program reveal that a major challenge for regular Upward Bound projects is overcoming the competing pressures on teenagers that keep them from investing in the type of continuous, multi-year academic effort that Upward Bound provides.[2]

C. EXAMINING PROGRAM FEATURES THAT MAY INCREASE UPWARD BOUND'S POTENTIAL TO PRODUCE DESIRED OUTCOMES

Assessments of whether Upward Bound operations are in line with current perceptions of effective practice are slightly different from assessments of whether the potential of Upward Bound operations for obtaining desired results could be improved. Ultimately, it is important to consider both questions and examine whether projects could adopt other specific measures that plausibly would improve their effectiveness. A number of modifications to program operations arguably could improve the potential effectiveness of Upward Bound projects. Several have been touched upon in other chapters of this report--either because they have been considered effective in other educational programs focused on disadvantaged youth or because a strong logical case can be made for their potential to enhance the services currently provided through Upward Bound.[3] These modifications include:

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[2] Since comparable drop-out rates are not available for prior years, it is unclear whether students today are more likely to withdraw from Upward Bound. Previous evaluations either did not compute dropout rates or did not use an entering cohort to calculate the rate. A GAO study focused on 1982 grantees did employ a cohort rate, but the study was limited to a small sample of 12 projects. It reported that 50 percent of students who entered had left Upward Bound prior to graduating from high school (GAO 1983).

[3] Chapters V, VI, and VII discuss the base of research and study findings leading to the assertion that modifications in the areas listed may enhance program effectiveness.

- Increased collaboration with target high schools to mutually reinforce the efforts of project and high school staff
- Increasing the frequency of parent involvement and clarifying projects' objectives for parents
- Providing assistance in locating job opportunities and accommodating Upward Bound to students' work schedules
- Instituting transition services to help Upward Bound students acclimate and progress once they enter college

Future results from the national evaluation are expected to shed new light on the effectiveness of versions of these strategies that some Upward Bound projects are currently using in the areas of collaboration with target high schools, parent involvement, and work assistance. Because formalized transition services are rare among Upward Bound projects, the evaluation results will not be able to assess the relative contribution of this modification to Upward Bound service delivery to project effectiveness.

The national evaluation also promises to reveal whether other variations in the following practices and structural features of Upward Bound projects are linked to improved levels of long-term effectiveness.

- The academic focus (whether a project emphasizes enrichment, support, blended, or remedial) and the type of coursework required (that is, math/science, foundational, structured, or unstructured)[4]
- Size of projects, as measured by enrollment
- Ratios of FTE staff to students
- The award of high school credit for Upward Bound coursework

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[4] These terms are elaborated upon in Chapter IV of this report.

Although a persuasive case can be made that each of these features contributes to Upward Bound's effectiveness, empirical support is needed. Some features may have negative consequences that outweigh their potential positive effects. Smaller enrollments, for example, may provide a "closer" and more trusting atmosphere in which students can comfortably ask for help, Upward Bound staff can more closely monitor their performance, and projects can develop a shared sense of purpose and cohesiveness (Newman and Wehlage 1995). Smaller enrollments, however, tend to increase per student cost and further constrain projects' ability to respond to unmet demand in their target schools.

To date, analyses conducted as part of the impact evaluation have not uncovered any systematic relationship between most of the features listed above and projects' effects on students during the first 12 months of participation. The award of high school credits constitutes the one exception. As expected, the award of high school credit for Upward Bound work shows a strong relationship to gains in the number of course credits earned by students participating in Upward Bound compared to those in a control group who did not participate (Myers and Schirm 1996). The question of long-term effects, however, can only be resolved through future analyses.

Certain questions pertaining to potential paths to improving Upward Bound's effectiveness, however, will not be resolved by the ongoing evaluation. For example, the national evaluation will not be able to enlighten policymakers about the value added by post-high school transition services or parent and target school strategies that go beyond the range of practices currently used by projects. Whether greater federal effort should be directed at exploring the potential contributions of these practices to projects' improved performance is a policy issue discussed in greater detail in the next section.

D. POLICY ISSUES FOR FUTURE CONSIDERATION

While many issues affecting the future course of the Upward Bound program depend on the national evaluation's findings regarding long-term effects, three issues emerge from this report on Upward Bound's operations that require policymakers' attention. First, the measures used by ED to hold projects' accountable for their performance and to help projects recognize where improvements are necessary should be revised to focus on areas requiring more careful monitoring. Second, the fundamental question of how to serve the large pool of eligible disadvantaged students who reportedly are unserved by Upward Bound or other precollege programs must be considered. Third, there is an ongoing need to counteract projects' tendencies to gravitate toward the status quo in their practices and to spur the exploration of approaches with the potential to increase effectiveness. The following discussion of these issues closes with consideration of broadening the level of experimentation with alternative modes of service delivery within Upward Bound.

1. Improved Measures of Project Performance and Accountability

Performance measures, as a key tool for federal and local program management, should highlight the most critical aspects of project operations and outcomes. Two important measures of project performance specified in the annual performance reports, however, fall short of this standard. As currently constructed, one measure obscures the critical problem of attrition among students who enroll in Upward Bound and the other measure overstates college enrollment rates by focusing only on the college enrollment of students who chose to remain in Upward Bound through their senior year. Specifically, the federal requirements on measures of attrition ask projects to report annual counts of the total number of students across the grade levels returning from the previous year.[5] Annual attrition rates based on these counts provide a homogenized picture of attrition because the annual counts of returning students include students who left during the prior year; they do not indicate the true proportion of an entering cohort of students who leave the Upward Bound program. As a result, projects may not completely realize the proportion of students whom Upward Bound fails to retain. Similar difficulties beset projects' annual reports to ED of postsecondary enrollment rates because the rates are based only on 12th graders who still are in the program. Although rates calculated for entering cohorts of students, or even students who were participants during either their junior or senior years of high school, are likely to be lower, they may create a more valid profile of project outcomes and areas in which to focus future attention.

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[5] Students who graduate are taken into account in these reports.

Redefining performance measures to address these concerns will require instituting safeguards to avoid an undesirable response from grantees. Safeguards will be particularly important should ED require that attrition rates be computed for cohorts of entering students, as suggested above. For instance, in anticipation of high drop-out rates that could jeopardize the receipt of future Upward Bound grants, projects may respond by excluding students who are more likely to drop out.[6] As noted, these students tend to have lower educational expectations, but students with lower expectations also tend to benefit more from the program--at least in the first year. Requiring projects to report data on key characteristics of the entering cohort of students--for example, educational expectations as indicated on their original application to the program or grade-point averages--and to maintain diversity across these characteristics may help reduce possible "creaming" reactions by projects.[7]

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[6] ED's cyclical competition of grants awards priority points to projects that have maintained or improved their performance as demonstrated by data from projects' annual performance reports. While priority points are only a portion of a grantee's score, they can be critical in the determinations of grants because many grantees register scores that are very close together.

[7] Data collection burdens and the potential for corruption are issues with the use of students' statements of educational expectations. Grade-point averages may be more reliable and feasible for (continued...)

2. Addressing the Unmet Need for Precollege Services

A number of sources indicate that there is a fairly large pool of students who meet Upward Bound's eligibility requirements but who do not receive any precollege services. A significant portion of this pool attends middle and high schools that are not currently Upward Bound target schools; a smaller portion attends existing target schools. Various measures imply the extent of unmet need. For example, Upward Bound currently serves around 8 percent of schools nationwide that have grade 8 or higher. Grantees reported twice as many applicants for openings as they can accept, and target schools indicated that there are almost five times as many students unserved by any precollege program who would be eligible for Upward Bound.

Unmet need can be addressed by funding new projects and/or by increasing enrollment in existing projects. To the extent that additional program funds have been available, the federal Upward Bound program has placed priority on addressing unmet need by adding new projects. Committed to preserving the average size across projects, the government has been reluctant to allow significant increases in the enrollments of existing projects. Regardless of which course is pursued to address unmet need, however, decision makers confront a basic dilemma involving resources: how to expand services to unserved populations when the average amount required to serve a participant with the current configuration of services amounts to around $4,000 each year. Congressional appropriations of the magnitude necessary to make major inroads in satisfying unmet need at this level of investment per student are difficult to secure. It is for this reason that interest runs high in the identification of alternative service configurations that reduce costs per student but achieve similar results. Whether

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[7](...continued)
projects to report. Scores on standardized tests may be even more reliable. Generally speaking, tested achievement and educational aspirations are closely related.

these dual criteria can actually be met is an unresolved question, but greater experimentation with alternative service delivery designs is a necessary step in finding the answer.

3. Fostering Experimentation and Projects' Efforts to Improve Efficacy

The imperative to secure future Upward Bound grants across competitive procurement cycles--and, in particular, to garner performance-based priority points--engenders a conservative disposition among project staff with respect to innovation and change. The descriptive information gathered by the national evaluation demonstrates that the vast majority of projects are very similar to each other in terms of their core operations and are generally reluctant to introduce substantial innovations in the ways services are delivered. As a consequence, several of the potentially promising variations in how projects deliver services mentioned earlier in this chapter (for example, the intensity of parent involvement and stronger collaboration with high school staff) do not occur.

Currently, few incentives exist within projects or at the federal level to stimulate the kind of self-reflection and experimentation that are key components of organizational renewal and program improvement. With the exception of professional development opportunities at TRIO meetings or through federal training grants, project staff are left largely on their own to develop and implement ideas for improving service delivery. There are no incentives attached to the recompetition process for introducing innovations, and there are clear disincentives when innovations involve risks that could result in a drop in any of the annual performance indicators related to enrollment, participation, and postsecondary outcomes.

While there is wisdom in the adage to avoid fixing what isn't broken, it is also costly not to seek strategies for improvement or apply resources more efficiently so that services can reach larger numbers of students who are likely to benefit. In this vein, Upward Bound may be at a stage of maturity where funds could be usefully directed at allowing a group of projects to propose and implement experiments designed to foster improved precollege practices.[8] Although it is premature to specify specific designs that grantees might implement as experimental initiatives, a few illustrations may be helpful. Projects might embark on experiments that front-load the intensity of the program--for example, requiring the current rigorous level of instruction prior to students' junior year and shifting to provision of test preparation, college application, and college counseling services to rising seniors and seniors. This approach would accommodate the predicted attrition at the end of students' junior year, yet provide a mechanism for maintaining assistance to students as they work during the summers. Alternatively, some projects may undertake approaches that reverse this strategy, building in more intense services, including participation in a residential summer, as students gradually become accustomed to the demands of Upward Bound. Projects might also develop approaches that call for frequent parent or relative communication with an Upward Bound staff member who has designated responsibility for parental involvement.[9] These exchanges could jointly develop techniques to reinforce persistence, discipline, and stress management skills of the child.

The results of these experiments, which would resemble researchable demonstrations, would need to be carefully documented and evaluated.[10] This would require a change in federal program provisions that previously have prohibited Upward Bound projects from conducting research. Special status in the recompetition process would also be required so that projects would not be penalized for risking a drop in their performance indicators.

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[8] It is also possible that the range of precollege programs across the nation may provide useful guidance regarding promising approaches--particularly if there is empirical support for their effectiveness.

[9] A key to establishing effective parent involvement in the school setting has been ensuring that a designated staff member has this function as a major, if not sole, responsibility (Epstein and Dauber 1993).

[10] In the 1970s, Upward Bound awarded demonstration grants to a small number of grantees. The RTI evaluation references nine such grants made in 1973-74. No written documentation of these grantees' focus or their results has been discovered.

The experimental approaches that projects might undertake will require careful consideration and development at both the grantee and federal program levels. Regional and national associations such as NCEOA should play a major role in stimulating thinking and leading discussions of fruitful avenues to pursue. To avoid the pitfalls that frequently befall national demonstration programs (for example, projects using demonstration funds to expand services rather than to improve upon existing practices), three elements will be critical for the success of an experimental initiative within Upward Bound: (1) a design phase that allows time for input from multiple stakeholders and the formulation of ideas, (2) criteria and guidelines that ensure that the experimental approaches are ambitious in nature, and (3) techniques for documenting results and disseminating successful practices to the Upward Bound community.

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APPENDIX A

PART 1: DATA SOURCES AND SURVEY METHODOLOGY

PART 2: REPORTS

DATA SOURCES AND SURVEY METHODOLOGY

The report draws on multiple sources of data, including three surveys designed specifically for the national evaluation of Upward Bound and field visits to 20 Upward Bound projects. The surveys focused on a sample of 244 Upward Bound project directors (the Grantee Survey), a sample of 754 Upward Bound target school liaisons and principals (the Target School Survey), and a sample of more than 3,000 Upward Bound applicants (the Student Survey). The Grantee Survey was conducted during spring 1993. The Target School Survey was conducted during 1993-94, and baseline data for the Student Survey were collected in 1992-94. The Student Survey was part of the national evaluation's longitudinal impact study. During 1992-94 all eligible applicants in a sample of 70 Upward Bound projects were administered questionnaires before they were randomly assigned to Upward Bound or a control group.[1] The Target School Survey used the sample of projects selected for the Student Survey. Questionnaires were administered in all target schools--both middle schools and high schools-- that had a student participate in Upward Bound during the previous three years. The field visits to 20 projects were made during 1993. Detailed descriptions of the sample designs for the Grantee Survey, the Target School Survey, and the Student Survey can be found in Fasciano and Jacobson 1995, Waldman et al. 1995, and Myers and Schirm 1996, respectively. These reports also describe other data sources used for comparisons cited in this report.

All surveys and the field visits were designed to be nationally representative. Upward Bound projects were selected through a stratified probability sample to reflect a full range of projects in terms of location, size, type of host institution, years in operation, and predominant race/ethnicity. Analyses of the Grantee Survey data were based on two samples. The first was representative of all Upward Bound projects. The second sample did not include projects hosted by community-based organizations and high schools, projects outside the 50 states, new projects, and projects that were not dedicated to serving students with physical disabilities; this sample consisted of 182 of the 244 projects. Both surveys had high response rates. For the Grantee Survey, responses were obtained from 92 percent of all project directors mailed a questionnaire. For the Target School Survey, a response rate of 96 percent was obtained; and for the Student Survey, the response rate was almost 100 percent.

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[1] Besides collecting baseline information on eligible applicants, we have since collected follow-up data on these students and their high school transcripts. The follow-up data collection was completed in 1994 and is reported in Myers and Schirm 1996. Another round of follow-up data and student transcripts will be collected during summer and fall 1996.

Comparisons of sample estimates described in this report generally refer to differences in percentages or differences in means between two or more mutually exclusive groups. Comparisons were based on tests of statistical significance that were computed using standard errors or related statistics that accommodated the sample designs. For example, the Grantee Survey is a stratified probability sample and the Student Survey is based on both a stratified random sample and a cluster sample. All standard errors were computed using SUDAAN, a computer software package that uses the Taylor-series linearization method to calculate standard errors.

REPORTS

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APPENDIX B

SUPPORTING TABLES FOR NEW DATA

TABLE B.1

FEDERAL FUNDING OF UPWARD BOUND PROJECTS AND PROJECT ENROLLMENTS, 1965-1995

Fiscal Year	Number of Projects	Current Dollars (Millions)	Constant 1993 Dollars (Millions)	Average Grant (Current Dollars)	Average Grant (Constant 1993 Dollars)	Students Served	Enrollment per Project	Current Dollars per Student	Constant 1993 Dollars per Student	Source
1965	17	$6.0	$30.3	$352,941	$1,783,925	3,261	192	$1,840	$9,300	
1966	218	26.0	125.8	119,266	577,112	20,333	93	1,279	6,187	
1967	249	28.0	128.2	112,450	514,849	23,503	94	1,191	5,455	
1968	285	28.0	121.1	98,246	425,037	26,639	93	1,051	4,547	
1969	296	29.8	120.7	100,676	407,896	25,743	87	1,158	4,690	
1970	295	29.6	110.7	100,339	375,260	27,346	93	1,082	4,048	
1971	299	30.0	104.9	100,334	350,827	28,142	94	1,066	3,727	
1972	316	31.0	102.1	98,101	323,101	33,809	107	917	3,020	
1973	416	38.3	117.5	92,142	282,513	51,755	124	741	2,271	
1974	416	38.3	105.8	92,142	254,262	48,603	117	789	2,176	
1975	403	38.3	95.9	95,114	238,018	46,181	115	830	2,077	
1976	418	38.3	90.2	91,701	215,730	41,834	100	916	2,156	
1977	345	41.5	91.7	120,290	265,835	38,887	113	1,067	2,358	
1978	382	50.0	103.6	130,979	271,257	39,315	103	1,273	2,636	
1979	412	61.0	116.0	148,058	281,504	35,391	86	1,724	3,277	
1980	437	62.5	106.9	143,021	244,596	37,210	85	1,680	2,873	
1981	446	66.5	103.5	149,105	232,068	37,680	84	1,765	2,747	
1982	432	63.7	93.1	147,500	215,447	35,805	83	1,780	2,599	
1983	423	68.4	95.4	161,623	225,433	32,606	77	2,097	2,925	
1984	422	70.8	94.6	167,664	224,065	32,600	77	2,170	2,900	
1985	421	73.6	94.5	174,856	224,563	32,500	77	2,265	2,909	
1986	400	72.3	90.5	180,847	226,280	31,121	78	2,324	2,908	
1987	403	74.5	89.5	184,983	222,197	30,500	76	2,444	2,936	
1988	404	80.4	93.8	199,044	232,256	32,330	80	2,487	2,902	
1989	502	93.6	105.6	186,423	210,318	34,390	69	2,721	3,070	
1990	502	100.8	108.4	200,760	215,991	38,030	76	2,650	2,851	
1991	501	131.6	137.3	262,762	274,035	39,453	79	3,337	3,480	
1992	534	158.8	162.1	297,301	303,545	44,535	83	3,565	3,640	
1993	534	157.6	157.6	295,112	295,112	45,377	85	3,473	3,473	
1994	534	146.9	144.8	275,094	271,111	41,690	78	3,524	3,473	TRIO
1995	600	171.6	164.2	286,000	273,670	44,700	75	3,839	3,673	TRIO

NOTES: With the exceptions indicated, all post-1970 data come from Planning and Evaluation Service Annual Evaluation Reports. Figures in constant dollars were calculated using the chain-type price index for state and local government expenditures.

TABLE B.2

DISTRIBUTION OF UPWARD BOUND GRANTEES BY DOMINANT FOCUS AND TYPE OF CURRICULUM

Type of Curriculum	Program Emphasis					
	Remediation (percent)	Remediation/ Support (percent)	Support (percent)	Support/ Enrichment (percent)	Other Enrichment (percent)	Enrichment (percent)
Math/Science	20	24	22	43	46	33
Foundational	0	12	56	29	19	39
Unstructured	32	28	36	13	7	11
Structured	49	36	4	15	22	12
Uncategorized	0	0	2	0	7	6
Total	101	100	100	100	101	101

TABLE B.3

APPLICANTS GRADE POINT AVERAGE BY LIKELIHOOD OF SELECTION

Grade Point Average	Likelihood of Selection[1]		
	Most Likely	Somewhat Likely	Least Likely
A	9%	6%	8%
B	38	34	33
C	42	45	40
D or below	12	15	19
Total	101%[2]	100%	100%

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[1] A Chi-square test of no statistical association between grade point and selection produces a X^2 of 9 with 6 degrees of freedom and suggests that applicants' grade point average is uncorrelated with the likelihood of being selected for Upward Bound.

[2] Sum is greater than 100% because of rounding.

GRANTEE SURVEY REPORT

Nancy J. Fasciano
Jon E. Jacobson

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EXECUTIVE SUMMARY

This report presents findings from a survey of Upward Bound grantees conducted in 1993-94 by Mathematica Policy Research, Inc. (MPR) under contract to the U.S. Department of Education. The survey is one component of MPR's comprehensive five-year evaluation of Upward Bound; the study also includes a survey of secondary schools affiliated with the program, 20 detailed case studies, and a longitudinal effectiveness study. The 244 Upward Bound grantees selected to participate in the grantee survey were chosen to represent the 440 regular Upward Bound projects funded in both the 1989-92 and 1992-95 grant cycles.[1] Ninety-two percent responded.

In this report, we focus on responses from a 90 percent subsample that consists of mature domestic projects hosted by postsecondary institutions. Projects located in the territories or hosted by high schools or community-based organizations were eliminated from the analysis sample because they do not represent the mainstream Upward Bound experience. Projects that were fewer than three years old at the time of the survey were also eliminated on the grounds that operations during projects' start-up phase are not representative of the operations of mature projects.

Key findings from the survey are presented here and highlighted at the beginning of each chapter subsection.

1. Student and Project Characteristics

Upward Bound serves primarily 10th- and 11th- graders; almost two-thirds of the students in the program at any one time are in these grades. Girls outnumber boys and comprise about 60 percent of all participants. Almost three-fifths of participants are African American, one-fifth are white, and one-eighth are Latino. On average, just over three-quarters of the participants in a project meet both the low-income and the first-generation eligibility requirements set forth in the federal regulations.

Four-fifths of regular Upward Bound projects are hosted by four-year institutions, but the proportion hosted by two-year schools has doubled since the late 1970s, when the Research Triangle Institute (RTI) conducted its evaluation of the program. Almost three-fifths of the newest projects in our analysis sample are hosted by two-year schools.

Most projects are located in urban areas, and most serve between 61 and 99 students. (About one-fifth serve fewer, and one-fifth serve more.) The vast majority of projects have been in operation for more than 10 years, and about one-half have operated for more than 20 years.

Nearly all projects provide six weeks of services during the summer and house students on campus during this component. The vast majority of projects also offer a "bridge" program, often of somewhat greater length, for high school seniors in the summer before they enter college. The length of the academic year component is more variable than that of either of the summer components, but typically spans most of the school year.

---

[1] Veterans and Math-Science projects were excluded from the survey sample.

Projects recruit students from a median number of 8 secondary schools. Larger and older projects recruit from more schools than do smaller and newer ones.

2. Program Goals and Offerings

Almost one-half of all project directors consider inadequate financial resources the primary obstacle to college completion for Upward Bound participants. Somewhat fewer believe insufficient academic preparation is the major barrier. But perhaps in the belief that the latter obstacle can be more easily addressed by the program, projects consistently focus on academic improvement as the principal program goal. To achieve this objective, projects usually provide instruction that parallels or goes beyond the material students are covering in their regular high school classes; relatively few projects emphasize remedial instruction.

The number and types of academic courses projects offer and require vary considerably. But most projects provide a highly structured curriculum with varied electives and multiple requirements in the major academic disciplines of English, math, and science. Offerings typically span a range of subject areas. In addition to English, math, and science, nearly all projects offer at least one nonacademic course, such as physical education or speech. Four-fifths offer at least one computer course, and two-thirds offer at least one social science course. As would be expected, offerings are more extensive during the summer than during the academic year, when the median number of courses offered drops from 17 to 10. Almost one-fifth of projects offer no courses during the academic year, presumably focusing on tutoring and counseling instead.

Although comparisons between the RTI and MPR studies are complicated by differences in the wording of questions, projects in operation today appear to be somewhat more likely than their predecessors in the mid-1970s to emphasize a traditional "core curriculum" that includes English, math, and science, and to offer a more extensive array of courses during the academic year.

Projects typically provide a broad range of support services to help students prepare for college. Nearly all projects arrange visits to college campuses and provide such services as personal counseling, tutoring, study skills development, financial aid counseling, help identifying potential sources of financial aid, assistance with applications, and training for college entrance examinations.

Projects are evenly split in terms of whether they provide opportunities for work experience. Those that do so generally help students obtain placements through the Job Training Partnership Program (JTPA) during the summer. The proportion of projects that help students find work during the academic year has dropped dramatically since the mid-1970s, from 65 percent to 18 percent.

3. Delivery Methods

Projects tend to favor the kinds of instructional methods most commonly used in high school and college courses. Most projects instruct students in both small groups and large lecture-style classes, and during the summer, most also require lab work and assign homework. Less traditional methods, such as individualized instruction, independent study, team teaching, and computer-based instruction, are used much less frequently. Projects also tend to take conventional approaches to subject content.

More innovative techniques, such as the use of cross-disciplinary themes to link courses in different subjects, are used frequently by only a minority of projects.

Participants are usually evaluated in writing two to three times a year. Many who participate in the bridge program prior to enrolling in college also receive feedback on their work in the form of college credits. Two-thirds of project directors report that all summer bridge participants earn college credit for some Upward Bound coursework. High school credit is less commonly awarded for work in Upward Bound: Only about one-quarter of projects report that a majority of participants receive high school credit for their work in the program.

The quality and intensity of projects' interaction with parents and target school staff is difficult to assess through the grantees' responses to survey questions. But the vast majority of projects meet with parents at least once a year to review students' performance and discuss plans for improvement, and most employ at least some target school staff as instructors. Four-fifths of projects also seek teachers' input in developing plans to improve students' performance, but most do so only two to three times a year or less. Projects are less likely to share their assessments of student performance with the schools; only about one-fifth do so more than once a year.

4. Staffing

Upward Bound staff tend to be well educated. More than one-half of summer and academic year staff--and four-fifths of project directors--hold advanced degrees. Women hold just over one-half of all staff positions, and head 56 percent of projects. At the time of the RTI study, women constituted fewer than one-half of counseling and instructional staff and headed only one-tenth of projects.

The ethnic or racial composition of staff tends to mirror that of project participants. In projects that serve primarily African American students, for example, 74 percent of the staff are African American, while in projects that serve primarily white students, 90 percent of the staff are white. Minority representation has improved since mid-1970s, when African Americans constituted about one-third of counselors and teachers and headed 47 percent of projects. Today, African Americans comprise about two-fifths of all staff and head 59 percent of projects.

Perhaps by design, staff turnover tends to be fairly high, particularly in the summer component. At over one-half of all projects, the majority of full-time summer staff have fewer than four years' tenure. In earlier years, Upward Bound projects were encouraged to include new staff to bring fresh perspectives to the program.

Projects typically rely on part-time staff during the academic year and significantly expand their full-time workforce during the summer. On average, projects employ a total of 8.2 regular staff members (excluding mentors and tutors) during the academic year, about one-third of whom work full time. The number of regular staff members rises to 13.2 during the summer, just over one-half of whom work full time. The average ratio of students to staff (in full-time equivalents) is 15 or 16 to 1 during the academic year and 4 or 5 to 1 during the summer. Student-staff ratios are positively correlated with student-staff contact during the academic year: The higher the ratio of teachers and tutors to students, the more frequent the contact between students and these staff members during this component.

5. Recruiting and Admission

Projects concentrate on enrolling students in the 9th and 10th grades, although about one-half also admit new participants as late as the 11th grade. Almost two-thirds report that they try to recruit as many students as possible and then screen for those who meet eligibility requirements, rather than targeting their recruiting more narrowly to students who are likely to qualify. Recruiting efforts are typically multi-faceted, with projects using techniques ranging from presentations in classrooms and assemblies at the target schools to newspaper advertisements. Virtually all projects rely upon target school staff--teachers, guidance counselors, and others--to identify candidates for the program.

Projects' recruiting efforts are usually very successful, generating a large pool of applicants. Three-quarters of projects receive at least two applications for every opening, and one-third receive four or more. Projects generally attract a high proportion of applicants of the same race or ethnicity as the majority of students already enrolled in the project. Girls tend to apply in greater numbers than boys, and at 27 percent of projects, boys comprise a quarter or less of the applicant pool.

In choosing among applicants, projects seem to seek out students who are motivated to achieve and present few behavior problems. (Two-thirds give considerable weight to students' aspirations or disqualify students who demonstrate no specific interest in college. Three-fifths disqualify applicants with any history of such behavioral problems as substance abuse or gang activity.) Applicants' academic performance is a key consideration for about one-half of all projects. However, it is not clear that these projects target high achievers. Only about one-third of all projects set minimum academic standards, and it is unclear how rigorous these standards are. (The survey did not inquire about the level of academic achievement sought.) Factors such as students' relative financial need and the gender or racial balance of the group are generally no more than secondary considerations.

Projects' emphasis on students' motivation suggests a shift in priorities since the mid-1970s. At that time, many projects used low motivation as a basis for selection. Today, relatively few projects are inclined to work with poorly motivated students.

6. Outcomes from Upward Bound

The primary goal of Upward Bound is to better prepare disadvantaged students for college. Continuation in Upward Bound and college attendance patterns are two outcomes that can indicate the extent to which this goal is achieved for Upward Bound participants and graduates. While data from the grantee survey do not indicate how participating students would have fared in the absence of Upward Bound, they do indicate the average outcomes for participants, as well as differences in outcomes for different types of Upward Bound projects. These indicators are based on the survey responses of Upward Bound project directors.

We calculate that, between the 1991-92 academic year program and the start of the 1992-93 academic year program, an average of one-fifth of each project's non-graduating students dropped out of Upward Bound. Projects report that their participants are most likely to drop out during the 11th grade and before the start of the summer program. The most frequently reported reason for students dropping out of Upward Bound is their desire to take a job during the summer or academic year. It is not surprising, then, that dropout rates tend to be higher at projects that offer work experience programs during only part of the year rather than year-round.

Upward Bound projects report that the vast majority of their graduates (86 percent) attend two- or four-year colleges. The share of graduates attending two-year colleges is 30 percentage points higher for projects hosted by two-year institutions than for projects hosted by four-year institutions, while the share of graduates attending four-year colleges is 35 percentage points higher for projects hosted by four-year institutions than for projects hosted by two-year institutions. These differences persist even after holding constant a variety of project-related characteristics, and may reflect unobserved differences in the programs offered at different types of Upward Bound projects, in the students served by these programs, or in both.

Most Upward Bound projects (78 percent) report that, in a typical year, at least three graduates enroll at the host institution. We calculate the average share of graduates attending the host institution as slightly above one-third (36 percent), regardless of the type of host institution. Of Upward Bound graduates who do not attend the host school, about three-fifths attend four-year colleges and universities, regardless of whether the host is a two- or four-year institution.

Besides host institution type, project size and the ratio of full-time regular staff to students are variables associated with significant differences in reported outcomes from Upward Bound. Controlling for other project characteristics, projects with 100 or more students report higher four-year and overall college attendance rates than projects with 61 to 99 students, and projects with more regular staff per student report higher four-year and overall college attendance rates than other Upward Bound projects. While differences in outcomes by project size may simply reflect the popularity of successful Upward Bound programs, differences in outcomes by the ratio of staff to students probably reflect benefits of participants receiving more attention from Upward Bound teachers, instructors, counselors, and administrators.

Analyses of longitudinal data on Upward Bound participants have the potential to further illuminate differences between students at different types of Upward Bound projects. Perhaps the greatest advantage of the longitudinal studies is the capacity to control for unobserved student characteristics through a random assignment design. That is, students in both the treatment and control groups should have had similar levels of academic motivation and college preparation before they entered Upward Bound, enabling researchers to attribute significant differences in student outcomes to participation in the Upward Bound program.

I. INTRODUCTION

For 30 years, the federal Upward Bound program has awarded grants to institutions of higher education and other qualified organizations to provide supplemental academic and support services to students from disadvantaged backgrounds, with the aim of helping them finish high school, gain admission to college, and successfully complete a degree program. Since its first year of full funding in 1966, the program has more than doubled in size, from 218 projects serving about 20,000 students, to more than 500 projects serving almost 45,000 students.[1] In constant 1993 dollars, funding growth over the same period was modest, amounting to a $28 million increase from the original appropriation of $130 million. Growth has been uneven. During the late 1960s and early 1970s, funding declined steadily to a low of $92 million in 1976, rose to $116 million in 1979 and then dipped again to $92 million in 1986 before climbing to $160 million in 1993 (all in constant 1993 dollars). Per-student funding has followed a similar course, starting at $6,394 in 1966, dropping to $1,936 in 1976, and fluctuating between $3,000 and $4,000 in subsequent years. In 1993, per-student funding was $3,652.

The federal regulations governing Upward Bound require projects to target services to disadvantaged youth ages 13 to 19 in grades 9 to 12. Two-thirds of the students served by a project must be potential first-generation college students with family incomes at or below 150 percent of the federal poverty level; the remainder must meet either the low-income or first-generation requirement. Projects are required to provide six weeks of intensive services during the summer, and to reinforce the summer experience with at least weekly services during the regular school year. The summer component is usually designed to simulate a college experience and often involves full-time residence on campus. During the academic year, students may meet with counselors and instructors either after school or on weekends. Projects have had considerable latitude in designing their programs, but the services provided during the two components typically include academic instruction, tutoring, counseling, visits to college campuses, and help with applications.[2]

---

[1] Of the 534 projects funded in FY1993, 440 were regular Upward Bound programs that were funded in both the 1989-92 and the 1992-95 grant cycles. The term "regular Upward Bound programs" refers to Upward Bound grants that fund services directed at students currently in high school. This report and the evaluation of which it is a part exclude separate Upward Bound grants to projects that serve veterans in need of additional support to enable them to enter and complete college, as well as separate Math-Science Upward Bound grants that concentrate on increasing eligible high school students' motivation and preparation to pursue math and science undergraduate programs.

A. RESEARCH CONTEXT

The Upward Bound program has been the subject of numerous national evaluations sponsored by the U.S. Department of Education and its predecessor, the U.S. Office of Education. Many of these studies, however, relied on student records from national surveys or focused on single projects. Only one comprehensive evaluation of Upward Bound's effectiveness has been completed since the program's inception. Conducted by the Research Triangle Institute (RTI) between 1973 and 1979, the study examined project characteristics and evaluated the effectiveness of Upward Bound in terms of a range of outcomes, including college enrollment and retention.

Subsequently, the U.S. Congress directed the U.S. Department of Education to fund another full-scale evaluation of regular Upward Bound projects, and in 1991, a contract was awarded to Mathematica Policy Research, Inc., to conduct a comprehensive five-year study. The study includes four components: a survey of almost 250 Upward Bound grantees, case studies of 20 Upward Bound projects that represent the varied populations served by the program, a survey of more than 700 affiliated secondary schools (known as "target schools"), and a longitudinal study of program effectiveness.

This report presents the findings from the survey of Upward Bound grantees conducted in 1993-94. Focused on program operations during the summer of 1992 and subsequent school year, the survey gathered detailed information about projects' environments, goals, admission policies, staffing, and services, as well as preliminary data about participants' college enrollment patterns.

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[2] New regulations issued in draft form in 1994 established more specific requirements in terms of the academic instruction projects must offer.

The research questions addressed in this report include:

- What kinds of students does Upward Bound serve? Does the mix of students--in terms of sex, age, race/ethnicity and socioeconomic status--vary significantly across projects?
- In what kinds of environments do Upward Bound projects operate? Does the basic structure of the program vary with these environmental characteristics?
- What are the major services that Upward Bound projects offer and emphasize?
- Does the character of the program--as defined by such aspects of the program as the presentation of material and efforts to involve students' parents--vary across Upward Bound projects?
- How are Upward Bound projects staffed? Do staffing patterns influence other aspects of the program?
- How do Upward Bound projects recruit and select students?
- What are the reported college attendance patterns of Upward Bound graduates?

B. SURVEY METHODOLOGY AND ANALYSIS

The Upward Bound grantees selected to participate in the survey were chosen from a total of 440 regular Upward Bound projects. The survey sample was designed to be nationally representative and to permit comparisons among important subgroups. Projects were selected through stratified probability sampling to reflect the full range of projects, in terms of location, size, type of host institution, years in operation, and predominant student ethnicity. (Appendix A provides a detailed discussion of the sample design.) Of the 244 project directors who were mailed surveys in the spring of 1993, 224 completed and returned the questionnaire, yielding a response rate of 92 percent. Data were weighted to produce national estimates.

The analyses in this report focus on a subset of the survey sample: projects that are (1) located in the 50 states or the District of Columbia; (2) hosted by postsecondary institutions; (3) mature, having operated for at least three years by October 1992; and (4) not dedicated to serving students with physical disabilities. This analysis sample consists of 182 projects. Eliminated from the sample were new projects (3 percent), projects hosted by high schools or community based organizations (4 percent), projects located in the territories (3 percent), and projects that serve exclusively disabled students (less than 1 percent). Data on characteristics of the entire sample, including these projects excluded from the analysis sample, is contained in Appendix B.

The project characteristics used to stratify the survey sample were also used to define subgroups for the analysis. Projects were categorized on the basis of the following characteristics:

- ***Location.*** Projects were defined as urban or rural depending on whether their host institution was located within a metropolitan statistical area.
- ***Size.*** Projects were defined in the analysis as small (60 or fewer students), medium-size (61-99 students), or large (100 or more students) on the basis of the number of funded slots reported in the 1992-93 Upward Bound performance reports. (For sampling purposes, size categories were based on data from the 1990-91 performance reports.)
- ***Type of host institution.*** Projects hosts' were identified as either two-year or four-year postsecondary institutions.
- ***Predominant student ethnicity.*** Projects were characterized as African American, white, Latino, Native American, Asian, or ethnically/racially diverse on the basis of information gathered in the survey about participants' racial and ethnic backgrounds. "African American" projects were defined as those in which at least 50 percent of participants are African American. Native American, Latino, and white projects were similarly defined. Asian projects were defined as having a student body that is at least 25 percent Asian or Pacific Islander.[3] Projects that have no predominant racial or ethnic group were categorized as ethnically/racially diverse.
- ***Years in operation.*** Projects were grouped into 3 ages categories: 3 to 5 years, 6 to 20 years, and over 20 years in operation.

---

[3] Asian projects were defined differently than others to insure that some projects fell into this subgroup; Asian students constitute a majority at very few projects.

Because some of these project characteristics are highly correlated, we used multivariate analyses to clarify the relationships between these program features and other characteristics examined in the survey. In these analyses, projects of various types are compared against the "typical" project: one hosted by a four-year college or university in an urban area, which has operated more than 20 years and currently serves between 61 and 99 students, most of whom are African American.

C. ORGANIZATION OF THE REPORT

Chapter II provides an overview of Upward Bound, in terms of the basic characteristics of students and projects. Chapter III examines projects' goals and then looks at the coursework and support services projects provide to achieve these goals. Chapter IV analyzes delivery methods, including the teaching techniques projects use and the opportunities they create for students' parents and high school teachers to participate in program planning and activities. Chapter V explores project staffing, in terms of the personal characteristics of staff and the influence of staffing patterns on various program characteristics. Chapter VI examines recruiting and selection of students. Chapter VII analyzes the college attendance patterns of Upward Bound graduates, as reported by project directors, and explores differences between projects hosted by two-year schools and projects hosted by four-year schools.

II. OVERVIEW OF PROJECTS

Our description of the Upward Bound program begins with an overview of basic project characteristics. The first section of this chapter describes the students served by Upward Bound--their grade levels, racial or ethnic backgrounds, and socio-economic characteristics. The second section describes projects themselves--their sizes, settings, and years in operation--and outlines the basic structure of the program in terms of the length and location of services. The third section focuses on projects' affiliations with other programs and institutions and includes survey data about the number of schools from which projects recruit students, the other programs for disadvantaged students that are sponsored by projects' host institutions, and the funding projects receive from sources other than the U.S. Department of Education. Key findings are highlighted at the beginning of each section.

A. STUDENT CHARACTERISTICS

- Girls constitute the majority (59 percent) of Upward Bound participants.
- Almost two-thirds (63 percent) of the students in the program at any one time are in the 10th or 11th grade.
- Almost three-fifths of participants are African American, one-fifth are white, and one-eighth are Latino.
- On average, 78 percent of project participants are both low-income and potential first generation college students.

Table II.1 shows the distribution of summer 1992 participants in terms of sex, grade level, and race or ethnicity. (The distribution of 1992-93 academic year participants is virtually the same as that of summer non-bridge program participants.) Girls constitute the majority of Upward Bound participants; a three-to-two ratio holds in both the non-bridge summer program and the bridge program. Most

TABLE II.1

STUDENTS SERVED BY UPWARD BOUND: SUMMER 1992

	Percentage of Students	
	Non-Bridge	Bridge
Sex		
Male	41	38
Female	59	62
Grade		
8	1	NA
9	16	NA
10	31	NA
11	32	NA
12	20	NA
Race/Ethnicity		
African American	57	64
White	20	11
Latino	12	15
Asian	4	5
Native American	6	4
Other	1	2

NOTE: NA = not applicable.

participants are in the 10th or 11th grade; together, students at these two grade levels comprise two-thirds of the total number participating in the program. Project directors report fewer 12th graders than 11th graders, which suggests that students drop out of the program in substantial numbers between these two grades and are not replaced by other 12th graders.[1]

Upward Bound serves primarily African American students. Fifty-seven percent of participants in the 1992 non-bridge summer program were African American, 20 percent were white, and 12 percent were Latino. Asian and Native American students comprised just 4 percent and 6 percent of participants, respectively. In the summer bridge program, the proportion of African American students was even higher (64 percent) than in the non-bridge program, and the number of white student substantially lower (11 percent).

The federal regulations governing Upward Bound require grantees to target services primarily to students whose family incomes are at or below 150 percent of the federal poverty level and whose parents do not have a degree from a four-year school. Almost nine-tenths (87 percent) of the students in projects included in our analysis sample meet the first generation requirement. Three-quarters (77 percent) meet the low-income requirement; virtually all of these students are also potential first generation college students. Most projects exceed the statutory minimum requirement that at least two-thirds of participating students meet both eligibility criteria. On average, project directors report that 78 percent of the participants in their projects meet both eligibility criteria, 13 percent meet just the first generation requirement, and 4 percent are just low-income.[2]

---

[1] We assume that survey respondents defined 12th grade summer program participants as students who would be 12th graders in the fall. The close correspondence between the percentage of 12th graders in the 1992 summer program (20 percent) and the percentage in the 1992-93 academic year program (23 percent) supports this assumption.

[2] On average, directors provided inconsistent data about four percent of their students.

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B. PROJECT CHARACTERISTICS

- Four-fifths of the colleges and universities that host regular Upward Bound projects are four-year institutions.
- Two-thirds of Upward Bound projects are located in urban areas.
- Three-fifths serve between 61 and 99 students.
- Four-fifths have operated for more than 10 years; about one-half have operated for more than 20 years.
- One-half serve mainly African American students and are therefore classified in our analysis as African American projects. One-fifth serve primarily white students. The proportion of projects that serve primarily Latino, Asian, or Native American students has grown substantially in recent years. Together, these three project types comprise 81 percent of the most recently funded projects in our analysis sample (projects three to five years old).
- At almost 9 in 10 projects, the non-bridge summer component is 6 weeks long. The length of the academic year component is more variable, but 7 in 10 projects provide services for at least 27 weeks of the school year.
- Almost 9 in 10 projects have a residential summer component.
- Almost 9 in 10 projects offer a bridge program for high school seniors in the summer before they enter college.

In the first part of this section, we document characteristics, such as type of host institution, that were used to define subgroups for the analysis. The second part summarizes survey data about the length and location of services during the summer and academic year.

1. Project Host Type, Age, Location, Size, and Student Race/Ethnicity

Sixteen project subgroups were defined on the basis of five project characteristics: host type, location, size, student race/ethnicity, and years in operation. Table II.2 presents a cross-tabulation of the percentages of projects in each of these groups. As shown, four-fifths of the projects in the analysis sample are hosted

TABLE II.2

BASIC PROJECT CHARACTERISTICS

	Location		Host Type		Size			Predominant Student Race /Ethnicity						Years in Operation		
	Rural	Urban	4-year	2-year	Small	Medium	Large	African American	White	Latino	Asian	Native American	Diverse	3-5	6-20	Over 20
Total (%)	33	67	81	19	20	57	23	53	22	10	6	3	7	15	32	54
Location																
Rural			72	29	17	64	19	24	47	9	2	7	10	16	30	54
Urban			86	14	21	54	25	67	10	10	7	1	5	14	32	53
Host Type																
4-year	29	71			16	57	27	55	22	8	6	3	6	8	28	64
2-year	50	50			37	57	6	41	23	18	5	3	10	44	48	9
Size																
Small	29	71	66	34				34	38	11	8	1	7	32	43	24
Medium	37	63	81	19				54	20	11	7	4	4	14	36	50
Large	28	72	95	5				66	12	6	1	0	14	0	10	88
Predominant Student Race/ Ethnicity																
African American	15	85	85	15	13	58	29							10	32	58
White	71	29	80	20	34	53	13							13	31	56
Latino	33	67	66	34	24	63	14							28	48	24
Asian	14	86	85	15	29	71	0							32	31	37
Native American	79	21	79	21	8	78	14							21	26	53
Diverse	48	52	71	29	20	31	49							20	9	71
Years in Operation																
3-5	37	63	43	57	45	55	0	35	19	19	13	4	9			
6-20	31	69	71	29	28	65	8	53	22	15	6	3	2			
Over 20	34	66	97	3	9	53	38	57	23	4	4	3	9			

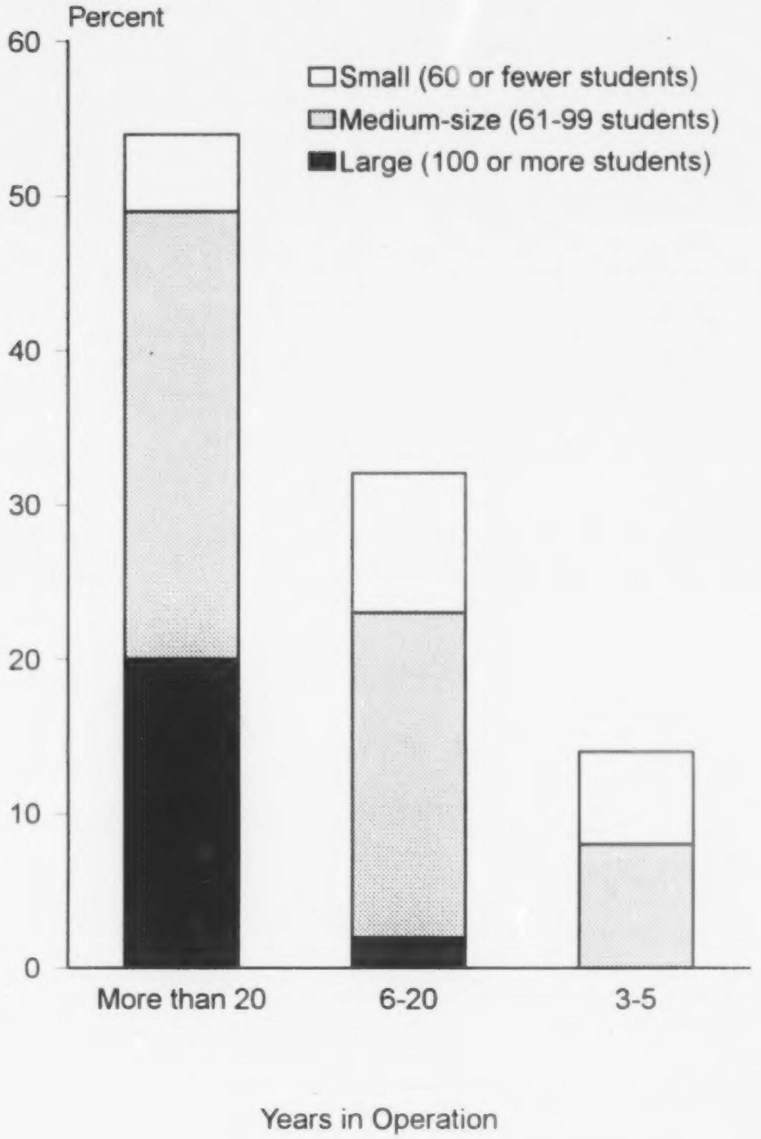
NOTE: Entries in each subcategory sum to 100 percent across the row.

by four-year colleges or universities. More than three-quarters have been in operation for more than 10 years, and just over one-half have operated for more than 20 years, the vast majority without interruption. Projects based at four-year schools tend to be older than those based at two-year schools. Sixty-four percent of the former, compared with nine percent of the latter, have been in operation for more than 20 years. This difference reflects a shift in Upward Bound funding patterns. In the program's early years, grants were awarded almost exclusively to four-year colleges and universities. In the late 1970s, when RTI prepared the follow-up to its initial report on the program, two-year colleges constituted just 9 percent of the colleges and universities that hosted the program. But the proportion of grants awarded to community colleges and other two-year postsecondary schools has risen steadily, so that at present, these schools host one-fifth (19 percent) of all projects and almost three-fifths (57 percent) of the newest projects in the analysis sample (those three to five years old).

Two of three projects (67 percent) are located within a metropolitan statistical area (MSA) and are therefore classified in the survey analysis as urban. Directors' descriptions of the communities in which their host institutions are located are sometimes at variance with the Census Bureau classification. Although most of the directors whose projects were categorized as urban report that the project is located in a city, one-quarter consider the college or university community to be suburban or even rural. Like project age, location is correlated with host type. Seventy-one percent of four-year colleges and universities that host Upward Bound projects are located in urban areas, compared with 50 percent of the two-year schools that host the program.

Almost three-fifths (57 percent) of projects are medium-size, with 61 to 99 students; one-fifth (20 percent) are small, with 60 or fewer students, and one-fifth (23 percent) are large, with 100 or more students. Project size varies with age. As shown in Figure II.1, about one-half of the three- to five-year-old projects have 60 or fewer students; none have more than 99. By contrast, few projects in operation for more than 20 years have fewer than 61 students, and almost two-fifths have 100 or more.

FIGURE II.1
PROJECT SIZE AND YEARS IN OPERATION

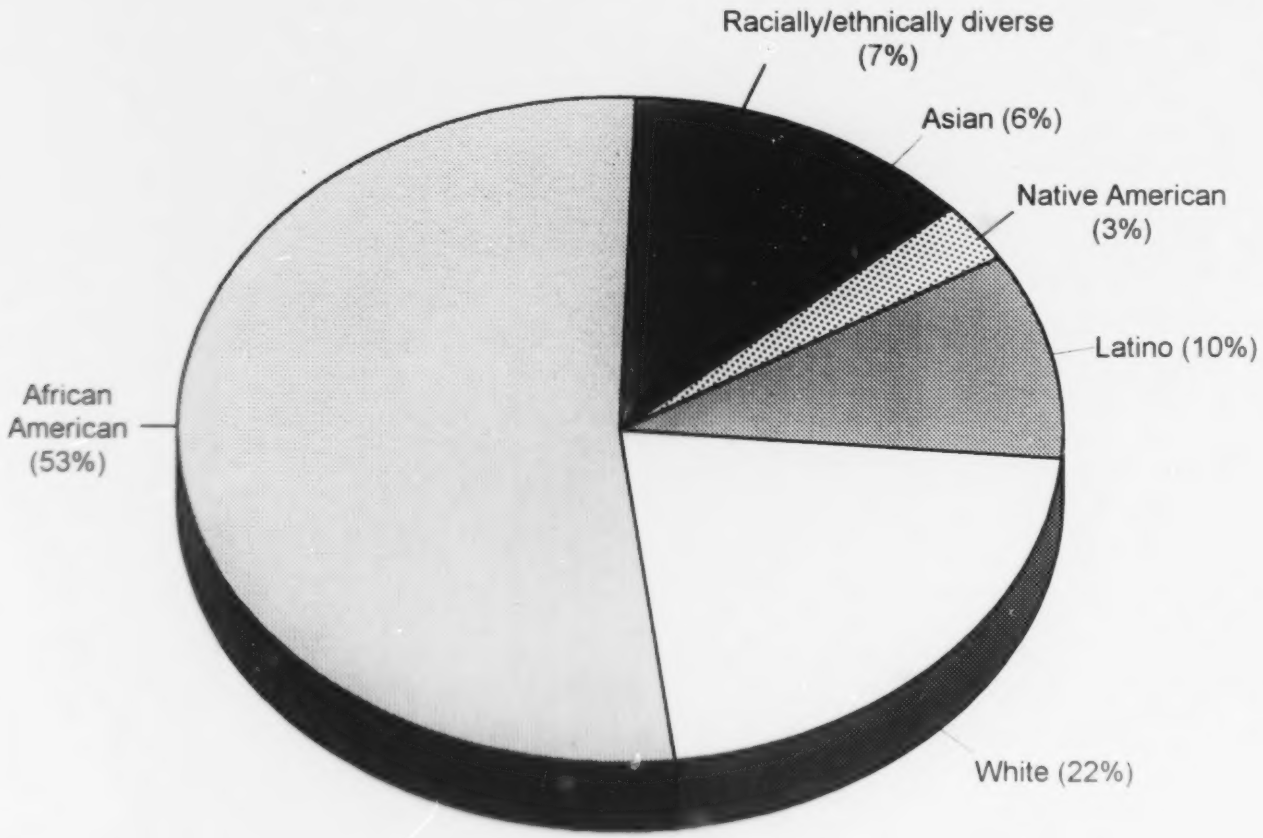


One possible explanation for the correlation between size and age is that projects tend to start small and expand over time. However, differences in enrollment levels between older and newer projects may also reflect changes in program philosophy over the years. Projects established in the late 1960s and early 1970s may have actively sought to enroll large numbers of students from the outset, while directors of more recently established projects may prefer to concentrate their resources on a smaller group of students. Project size is also correlated with host institution type. As would be expected given their greater longevity, projects based at four-year schools are more likely than those at two-year schools to be large: 27 percent of projects at four-year colleges or universities have 100 or more students, compared with just 6 percent of projects at two-year schools.

Just over one-half (54 percent) of all projects serve primarily African American students and are therefore classified in this analysis, as in the sample design, as African American projects. White, Latino, and Native American students constitute a majority of participants at 22, 10, and 3 percent of projects, respectively (Figure II.2). Asians comprise at least one-quarter of the student body at 6 percent of projects. (Consistent with the sample design, these projects are classified as Asian in our analysis.)

As shown in Figure II.3, African American, Latino, and Asian projects are typically located in urban areas, while Native American and white projects serve primarily rural communities. Although the vast majority of projects of all racial or ethnic types are hosted by four-year colleges and universities, those with primarily Latino students are somewhat disproportionately represented among projects based at two-year schools. Although Latino projects make up just 10 percent of all projects, they account for 18 percent of projects hosted by two-year colleges; just over one-third (34 percent) of all Latino projects are based at two-year schools.

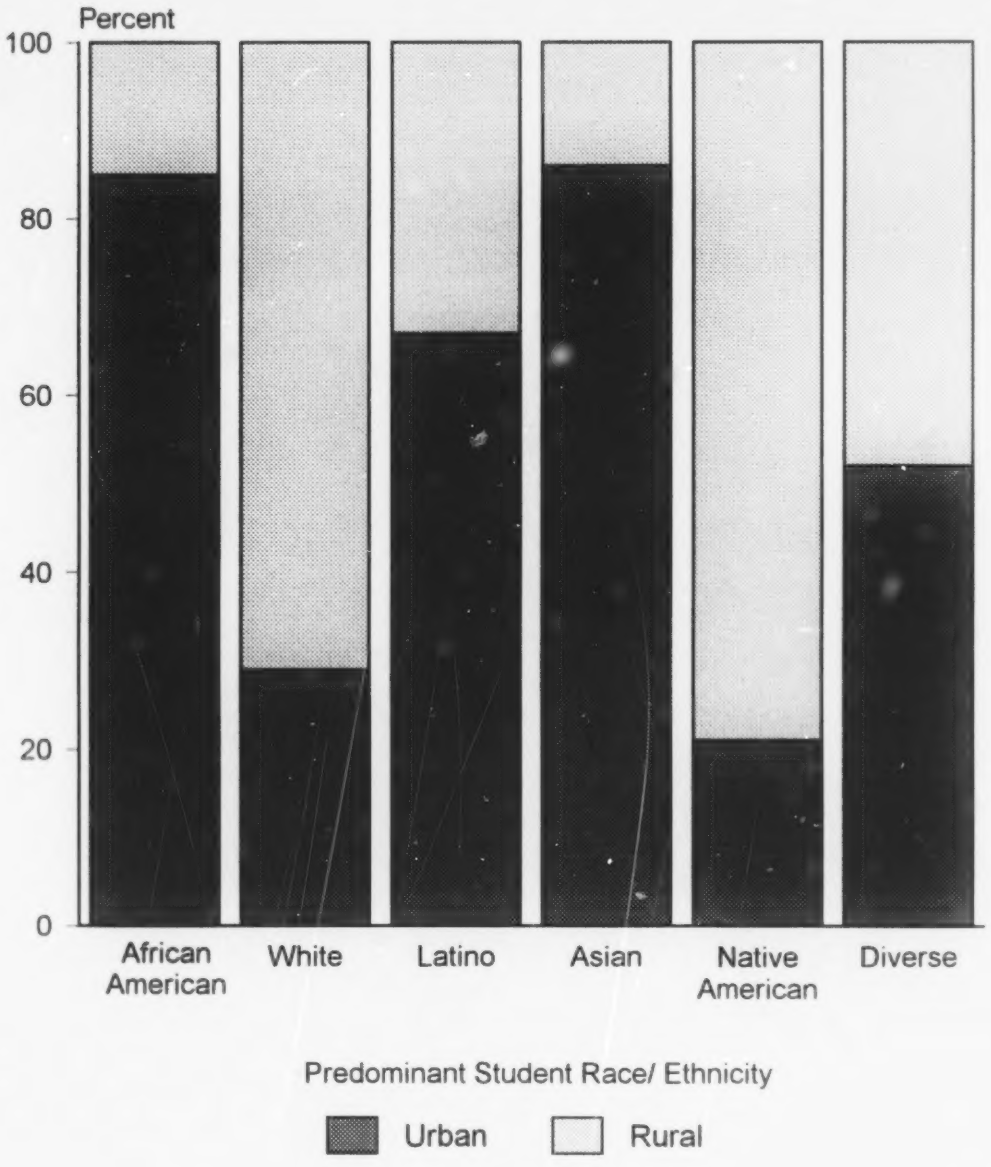
FIGURE II.2
DISTRIBUTION OF PROJECTS BY PREDOMINANT STUDENT RACE/ETHNICITY



NOTE: Percentages do not sum to 100 due to rounding.

FIGURE II.3

PROJECT LOCATION, BY PREDOMINANT STUDENT RACE/ETHNICITY



2. Program Components

Federal regulations set basic requirements for the summer and academic year components. Projects are required to provide services to students for 6 weeks during the summer.[3] The vast majority (86 percent) of non-bridge summer sessions are exactly 6 weeks long, and almost all (98 percent) are between 5 and 7 weeks long. More than four-fifths (86 percent) of all projects offer a bridge program for high school seniors in the summer before they enter college. Most bridge programs (73 percent) are also between 5 and 7 weeks long, but a substantial number (26 percent) run 8 to 10 weeks. The length of the academic year component is more variable than either of the summer programs, but two-thirds (69 percent) of academic year programs operate for at least three-quarters of the school year (27 weeks). On average, programs provide services to participants for 31 weeks of the school year.

Projects are required to offer some services at least once a week during the academic year.[4] Four-fifths (80 percent) of project directors report that students meet with counselors at least once a week. An equal number (83 percent) report at least this amount of contact between students and tutors, and three-quarters (73 percent) report that students meet with instructors at least once a week.[5] A complete picture of students' contacts with staff during the academic year cannot be developed from the survey data, however, since directors were not asked about the total number of contacts, the length of any counseling or instruction sessions that take place, or when sessions are scheduled (whether on weekends or after school).

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[3] Exemptions may be granted to projects that "demonstrate that a shorter or longer session will not hinder the effectiveness of the project nor prevent the project from achieving its stated goals and objectives" (S. 645.12 (a)(2)).

[4] Projects may be permitted to provide services every two weeks during the academic year if the service site or project staff are not easily accessible to participants.

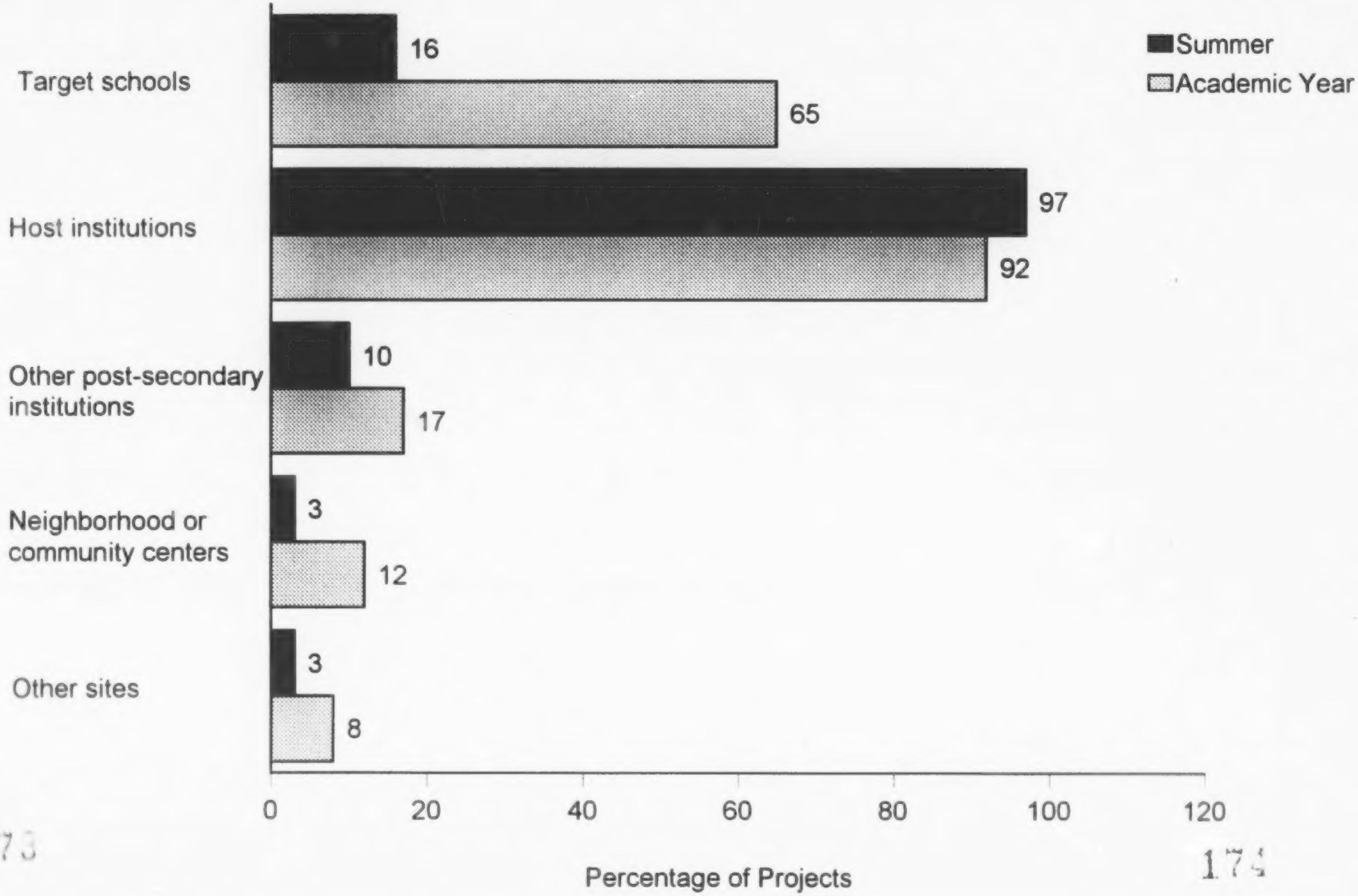
[5] The frequency of staff-student contact during the academic year is discussed in more detail in Chapter V.

The location of the host institution may be a factor in the amount of contact participants have with staff during the academic year. Some directors of rural projects observed in the comments section of the survey that the distances between the host institution and students' homes and high schools make it difficult for rural projects to provide as extensive an academic year program as urban projects do. The survey data, however, suggest that distance may be a barrier only for projects that are located in truly remote areas or that serve students whose homes are widely dispersed, rather than for rural projects generally. When the influence of other project characteristics is accounted for, rural location generally has no significant impact on the amount of staff-student contact reported.

Projects typically provide services at more than one site during the academic year. Nine-tenths (92 percent) schedule some classes and services at the host institution. Two-thirds (65 percent) meet with students at their high schools. Projects that locate services at their target schools during the academic year do so at an average of 79 percent of the schools from which they recruit. (Fifty-one percent provide services at 5 or fewer schools; 20 percent meet with students at 11 or more schools.) Rural projects are even more likely than urban ones to locate some services at target schools during the academic year (77 percent versus 60 percent).

During the summer, projects tend to provide all services at a single location, usually the host institution (Figure II.4). The vast majority (87 percent) of projects have a residential summer component. Not surprisingly, residential programs are much more common among projects at four-year colleges and universities (94 percent) than among those at two-year colleges (57 percent), many of which lack dormitory facilities. Anecdotal evidence suggests that some projects without dormitory facilities (mainly projects at two-year schools) "borrow" facilities at another school for at least part of the summer session so that students will have a campus experience. The survey results tend to support these accounts. One-quarter (26 percent) of projects based at two-year schools provide services at other postsecondary schools during the summer, compared with just 6 percent of projects based at four-year schools.

FIGURE II.4
LOCATION OF SERVICES



C. OTHER OPERATIONAL FEATURES

- Projects recruit students from an average of 10 schools, but there is considerable variation about the mean. The median number of schools from which projects recruit is 8. Larger and older projects recruit from more schools than smaller and newer projects.
- Nine in 10 colleges or universities that host Upward Bound projects sponsor other precollege or college assistance programs for disadvantaged youth. Student Support Services is the program that most often coexists with Upward Bound
- Four of five projects receive support from the USDA National School Lunch and School Breakfast programs (NSLP/SBP). Though the USDA meal programs are the most common source of funds outside of the Department of Education, they probably provide fewer dollars per student than do other funders.

Directors were also surveyed about such operational features as the number of high schools and middle schools from which they recruit students, the presence of other precollege or college assistance programs on the host campus, and the funding their projects receive in addition to grants from the U.S. Department of Education.

1. Target Schools

Projects may draw students from any number of middle or secondary schools within the area project administrators have targeted for service. On average, projects recruit from about 10 schools, but some draw students from as few as 2 or 3, while others work with as many as 30 or 40. (The small percentage of projects that recruit from a large number of schools skews the average; the median number of schools from which projects draw students is 8.) The number of target schools associated with a project typically increases with project size. While almost one-half (46 percent) of small projects recruit from fewer than 6 schools, only one-quarter (25 percent) of medium-size projects and one-eighth (12 percent) of large projects work with fewer than 6 schools. Differences between small and medium-size projects persist even when we control for such basic project characteristics as location, host type, age, and predominant student ethnicity. Projects also seem to cultivate recruiting relationships with an increasing number of schools over time. Even when the influence of project size and other basic project characteristics is accounted for, newer projects draw students from significantly fewer schools than do older projects.

Ethnic or racial composition also seems to affect the number of recruiting relationships projects maintain. White, Native American, and ethnically and/or racially diverse projects draw students from significantly more schools than do the majority of projects, which serve primarily African American students. As shown in Figure II.5, the percentage of projects that recruit from more than 10 schools varies considerably across these project types. There may be no single reason for these differences. Anecdotal evidence suggests that some Native American projects recruit from a large number of schools because they are committed to serving Native American students, who happen to be dispersed over a large number of communities. Ethnically and/or racially diverse projects may recruit from many schools for the opposite reason--to expose students to greater racial or ethnic diversity than they encounter in their individual high schools.

Projects' relationships with their target schools are typically longstanding. On average, projects have worked with more than three-fifths of their target schools for more than 10 years. Figure II.6 shows the percentage of projects that have worked with some or more than one-half of their target schools for a given period of time. While many projects have been affiliated with at least some of their target schools for fewer than six years, only one-fifth have worked with more than one-half their target schools for that short a period. By contrast, two-thirds (67 percent) of all projects have worked with more than one-half of their target schools for over 10 years; just over one-half (53 percent) of all projects have worked with more than three-quarters of their target schools for that length of time.

FIGURE II.5

PERCENTAGE OF PROJECTS THAT RECRUIT FROM MORE THAN 10 TARGET SCHOOLS

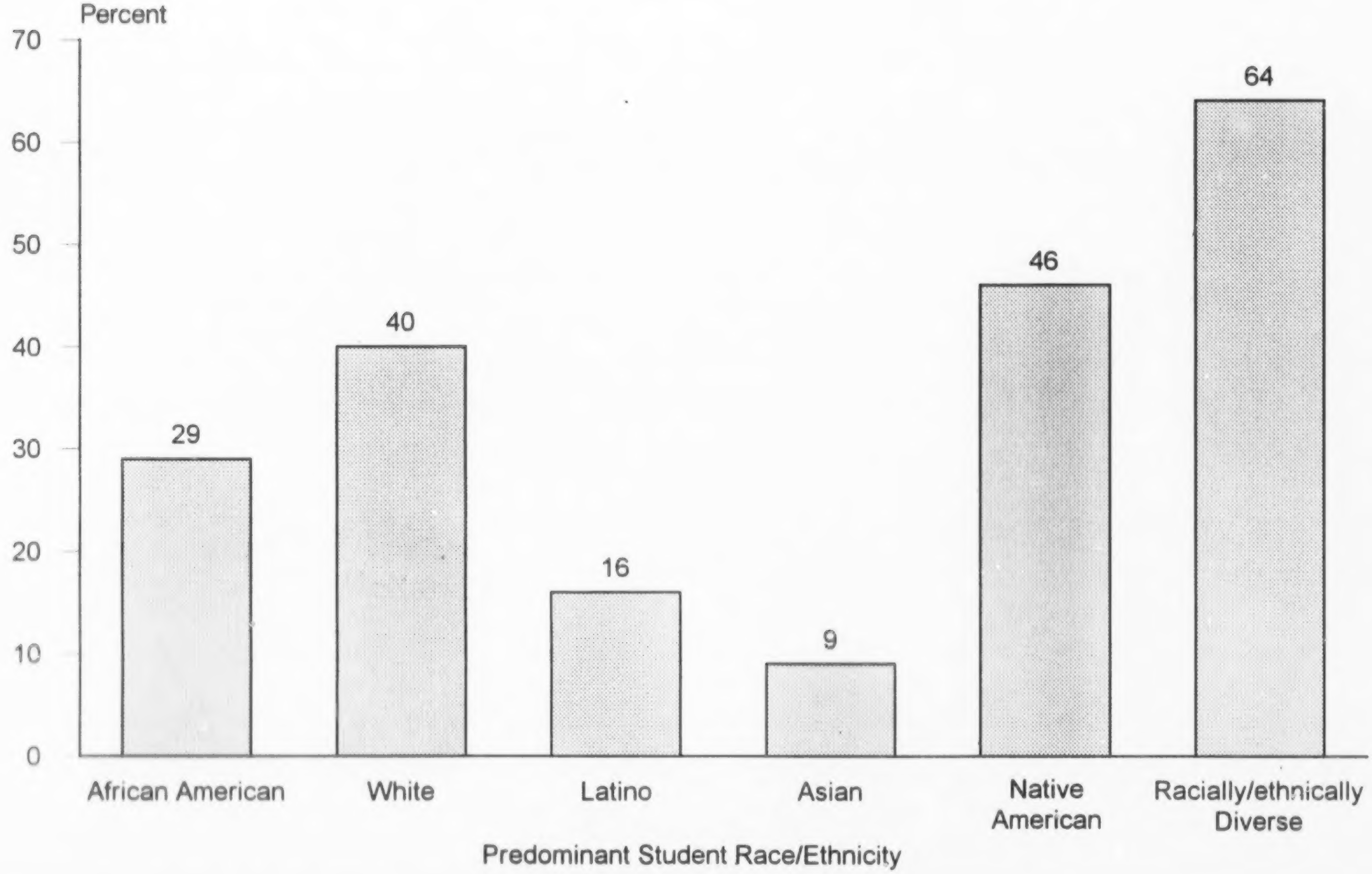
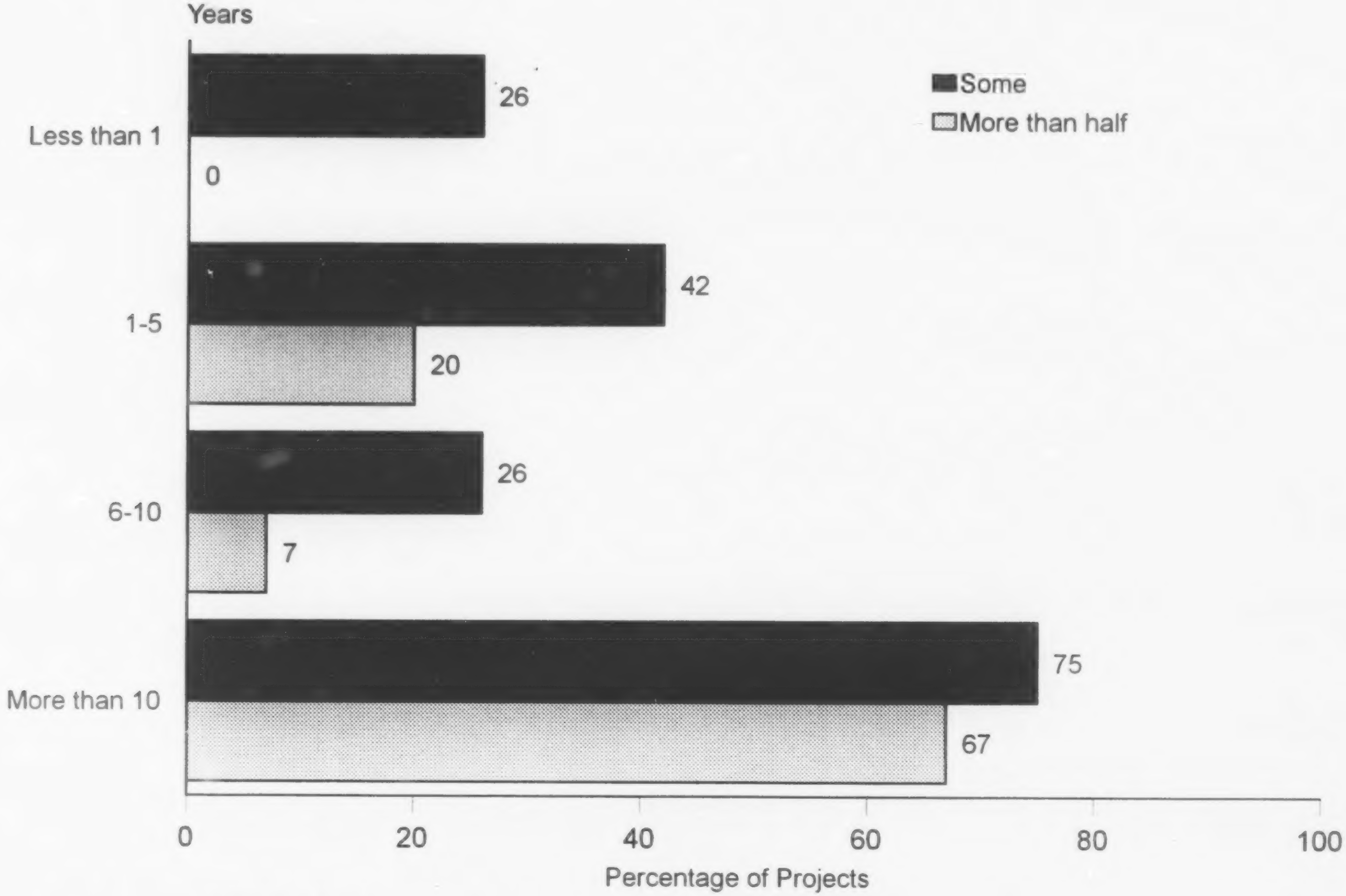


FIGURE II.6

TARGET SCHOOL RELATIONSHIPS: PERCENTAGE OF PROJECTS THAT HAVE WORKED WITH SOME/MORE THAN HALF OF THEIR TARGET SCHOOLS FOR A GIVEN NUMBER OF YEARS



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2. Other Precollege or College Assistance Programs on Campus

Nine in 10 (88 percent) colleges or universities that host Upward Bound projects sponsor other precollege or college assistance programs for disadvantaged youth; one-quarter (26 percent) sponsor three or more such programs. Colleges and universities that host large Upward Bound projects are more likely than others to support a range of programs for disadvantaged youth. Controlling for other basic project characteristics, the larger the Upward Bound project, the greater the likelihood that its host institution sponsors two or more other precollege or college assistance programs.

The programs most commonly found on campus with Upward Bound are the two other large TRIO programs: Student Support Services (SSS), which serves economically disadvantaged college students, and Talent Search, which provides services to the same type of students in their middle school and high school years (Figure II.7). Upward Bound Math/Science and Upward Bound Veterans projects are reported by 7 percent and 2 percent of survey respondents, respectively. The three TRIO programs are more likely to overlap today than they were in the mid-1970s, due to growth in all three programs. When RTI conducted its study, 45 percent of Upward Bound directors reported an SSS project on their host campus, 14 percent reported a Talent Search project, and 53 percent reported other federally funded programs. Today, the percentage reporting SSS and Talent Search has climbed to 68 percent and 39 percent, respectively. (A cross-survey comparison of the prevalence of other federally funded programs is not possible, because the current survey asked only about other federally funded precollege programs.)

3. Funding

U.S. Department of Education data indicate that Upward Bound projects received an average of $282,671, or $3,568 per student, in 1992-93. Per-student funding was fairly consistent across projects; although amounts ranged from $2,131 to $5,509 per student, 63 percent of projects received between

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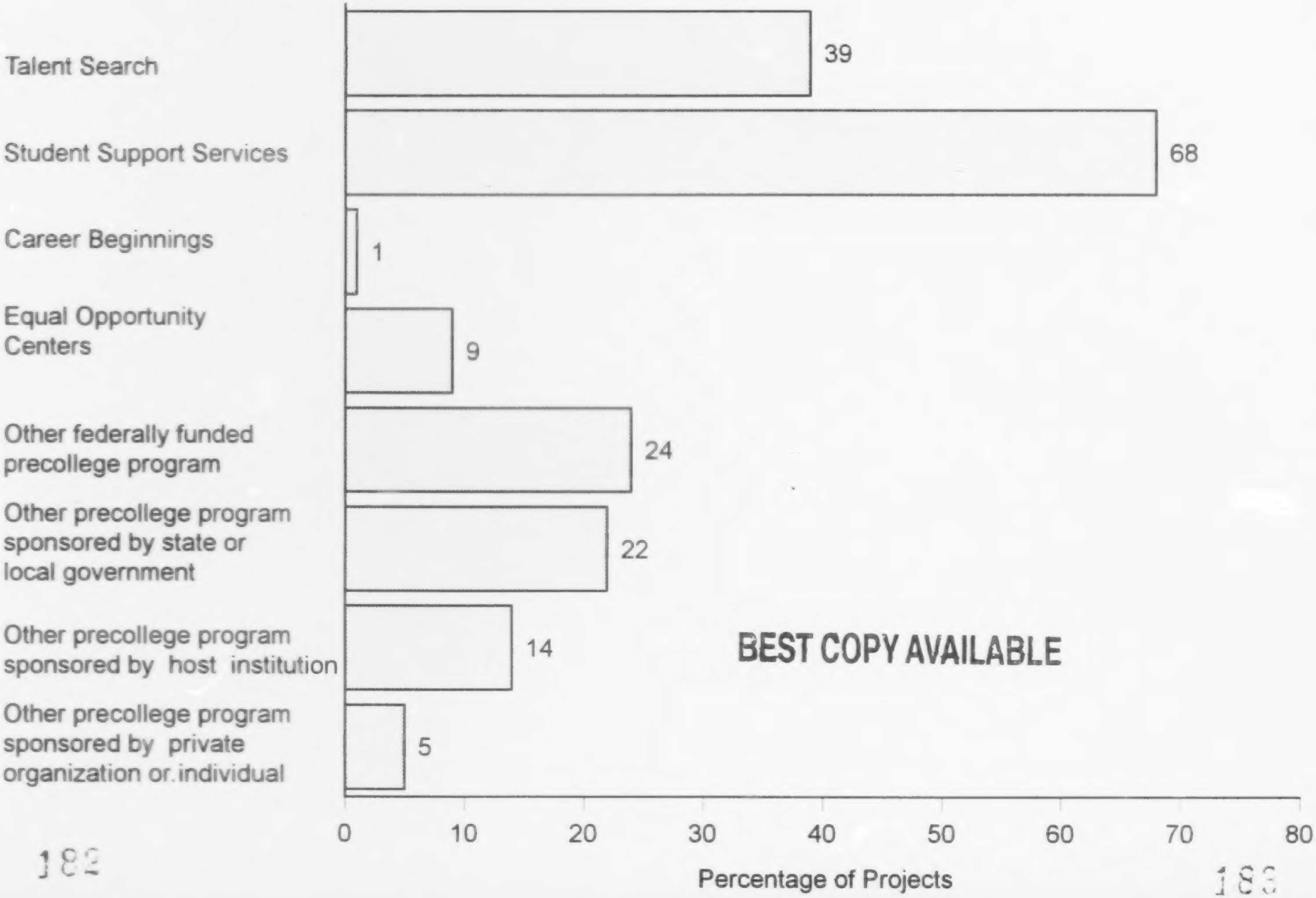
FIGURE II.7

OTHER PRECOLLEGE OR COLLEGE ACADEMIC ASSISTANCE PROGRAMS AT HOST INSTITUTION



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$3,000 and $4,000 per student. As part of the case study component of the Upward Bound evaluation, we queried directors of the 20 case-study projects about their operating costs and the support they receive from the Department of Education and other sources. This survey, reported in Clewall et al., revealed that projects' operating costs exceeded their Upward Bound grant funding by an average of $500 per student. Direct financial and in-kind support from the host institution (usually in the form of room and board, free use of facilities, and the like) typically fills about three-quarters of this gap.

The grantee survey results suggest that projects usually rely on other federal funding to fill the remainder of the gap.[6] Consistent with the case study results, funding from the USDA National School Lunch and School Breakfast programs (NSLP/SBP) was the most commonly reported form of outside support (Figure II.8). Four-fifths (81 percent) of survey respondents said they receive some support from the NSLP/SBP.[7] The proportion of projects that received financial support from other sources is considerably smaller. Fewer than one-fifth of all projects received other federal funds, foundation or philanthropic grants, state or local government grants, or corporate contributions. Fewer than one-tenth received $10,000 or more from any of these sources, and even fewer received $25,000 or more. The most common source of large grants appears to be institutions of higher education. One in 10 respondents reported receiving $25,000 or more from "other sources"; the most frequently cited group of donors in this category was institutions of higher education, most likely projects' own host institutions.

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[6] Unlike the case studies, which examined monetary and in-kind support, the survey explicitly asked respondents to exclude sources that provide only in-kind contributions.

[7] Only 8 of the 20 case study projects reported receiving funding from the USDA school meal programs. This difference between the case study results and the survey findings is partly attributable to sampling bias (introduced by the over-representation of certain types of projects in the case studies). The case study estimate is also highly imprecise because of the small sample size.

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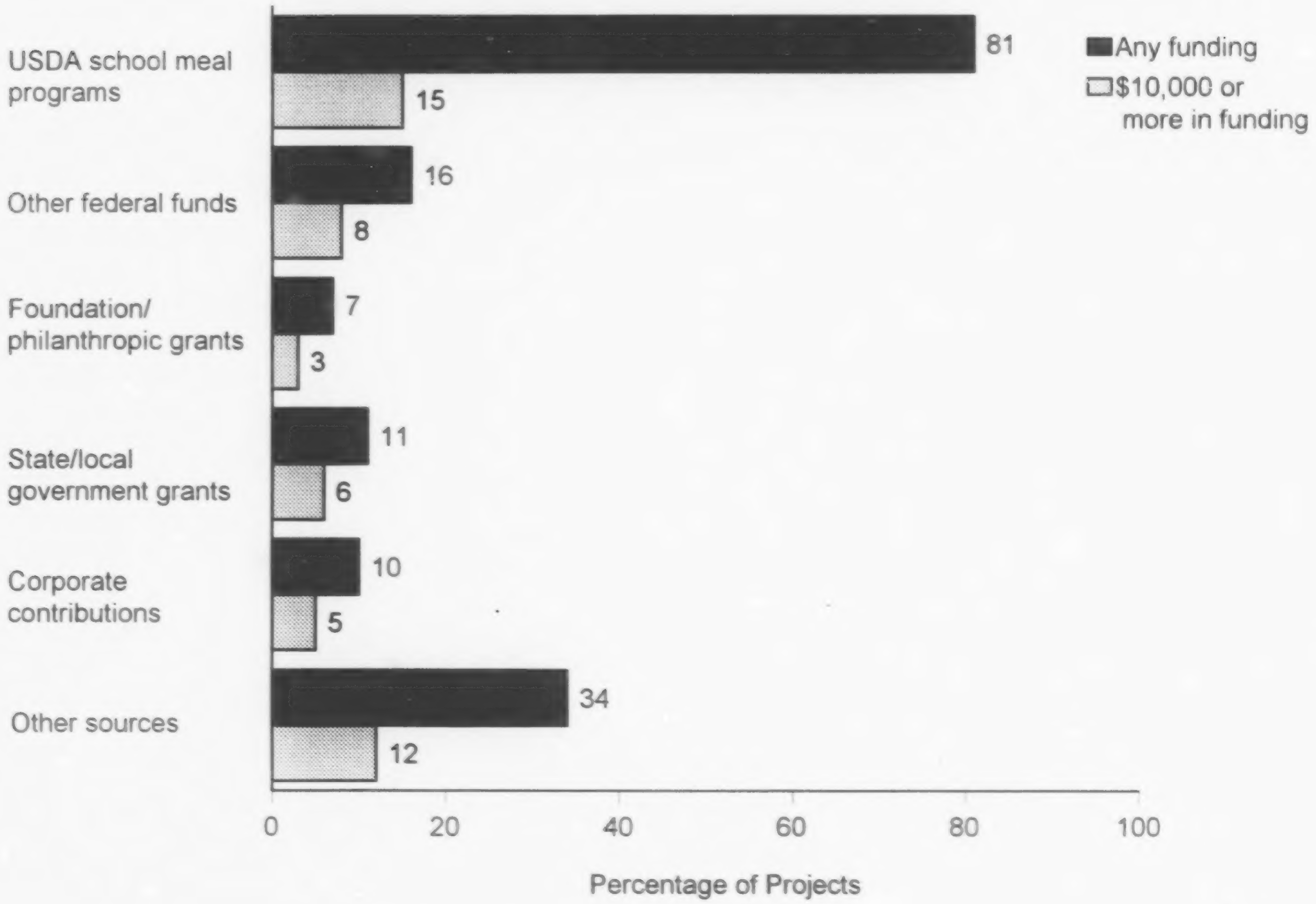
FIGURE II.8
SOURCES OF DIRECT FINANCIAL SUPPORT



Note: Sources that provide only in-kind contributions are excluded.

Although the NSLP/SBP was the most common sources of outside funds, the USDA meal programs probably provided fewer dollars per student than do other funders. If we assume that the amounts received from various sources were at the midpoints of the ranges shown in the survey, NSLP/SBP provided $92 per student in 1992-93. The largest average amount per student was provided by other federal sources ($219); followed by state/local government grants ($190); "other sources," including funds from higher education institutions ($164); foundation grants ($138); and corporate contributions ($105).

The number of students served by a project is not always a factor in the amount of funding received. Controlling for such basic characteristics as project age and host type, larger projects are more likely than smaller ones to report having received amounts in excess of $10,000 from the NSLP/SBP, state and local governments, and "other sources," but they were no more likely to report receiving grants of this size from foundations, corporations, and non-Upward Bound federal sources. Project age and location appear to influence the amount of state and local government funding projects receive, while host type is correlated with the level of NSLP/SBP funding. Regardless of size and other project characteristics, older projects and urban projects were more likely than younger projects and rural projects, respectively, to have received $10,000 or more from state and local government, while projects based at four-year schools were more likely than those at two-year schools to have received $10,000 or more from NSLP/SBP. None of the projects based at two-year schools, compared with 21 percent of those at four-year schools, received this level of funding from NSLP/SBP. The greater prevalence of residential summer programs among projects at four-year schools than among projects at two-year schools may partially account for this difference in NSLP/SBP funding.

III. PROGRAM GOALS AND OFFERINGS

When the Upward Bound program was established in the 1960s, inadequate financial resources were widely believed to be the primary obstacle to college access for disadvantaged students. Upward Bound was the first large federally supported program to address not only the financial barriers that confronted low-income students, but the academic and personal problems that prevented many of these students from pursuing postsecondary education. Initially, the program focused on helping students complete high school and gain admission to college. But as it became increasingly clear that many low-income youth who entered college had difficulty completing degree programs, the goals of the program were broadened and services were expanded to help students not only gain entry to college but to succeed once there.

To gain an understanding of how projects work to achieve these objectives, we surveyed directors about their projects' goals, instructional emphases, course offerings, requirements, and support services. Directors' responses suggest that projects consistently focus on academic improvement as a principal program goal. To achieve this objective, projects typically provide instruction that parallels or goes beyond the material students are covering in their regular high school classes; relatively few emphasize remedial instruction. Although course offerings and requirements vary, most projects provide a rich, structured curriculum, with an emphasis on instruction in the major academic disciplines (English, math, and science). The vast majority of projects also offer a wide range of support services to help participants define their goals, manage their coursework, pursue financial aid, and select a college.

A. OBSTACLES AND GOALS

- **Almost half of all project directors consider inadequate financial resources the primary obstacle to college completion for Upward Bound participants. One-third believe insufficient academic preparation is the major barrier.**
- **Four-fifths of projects report that academic improvement is the most important program goal. Improving students' access to financial aid, enhancing their personal skills, and providing exposure to college life are important secondary goals.**

In this section, we explore project directors' beliefs about the obstacles to college completion faced by Upward Bound participants and then examine the goals directors set for participants to help them overcome these barriers.

1. Obstacles to College Completion

Nearly one-half of all project directors believe inadequate financial resources are the most serious obstacle students face (Table III.1) One-third cite academic deficiencies of some sort as the greatest obstacle; poor writing and study skills, in particular, are thought to be serious handicaps. Surprisingly few project directors (13 percent) consider personal problems--such as difficulties living away from home, adjustment problems, or lack of family support--the primary reason for participants' failure to complete college. Among these personal problems, lack of support from family or spouse is most frequently singled out as a cause of failure.

Although directors' concerns vary, these differences are largely unrelated to such basic project characteristics as project size, years in operation, or predominant student ethnicity. To the extent that directors' perceptions of obstacles are correlated with these characteristics, the differences among the various project types defined by these characteristics are usually small. Directors of projects based at two-year schools, for example, are more likely than those at four-year schools to cite inadequate financial resources as the most serious obstacle for students; they are also less likely to consider such personal

TABLE III.1

MOST SERIOUS OBSTACLES TO COLLEGE COMPLETION

	Percent
Inadequate financial resources	47
Insufficient academic preparation	33
Deficiencies in writing skills	
Deficiencies in study skills	
Deficiencies in math and science	
Deficiencies in communication skills	
Insufficient academic planning	
Personal problems	13
Lack of support from family or spouse	
Inability to adjust to college life	
Difficulties in living away from home	

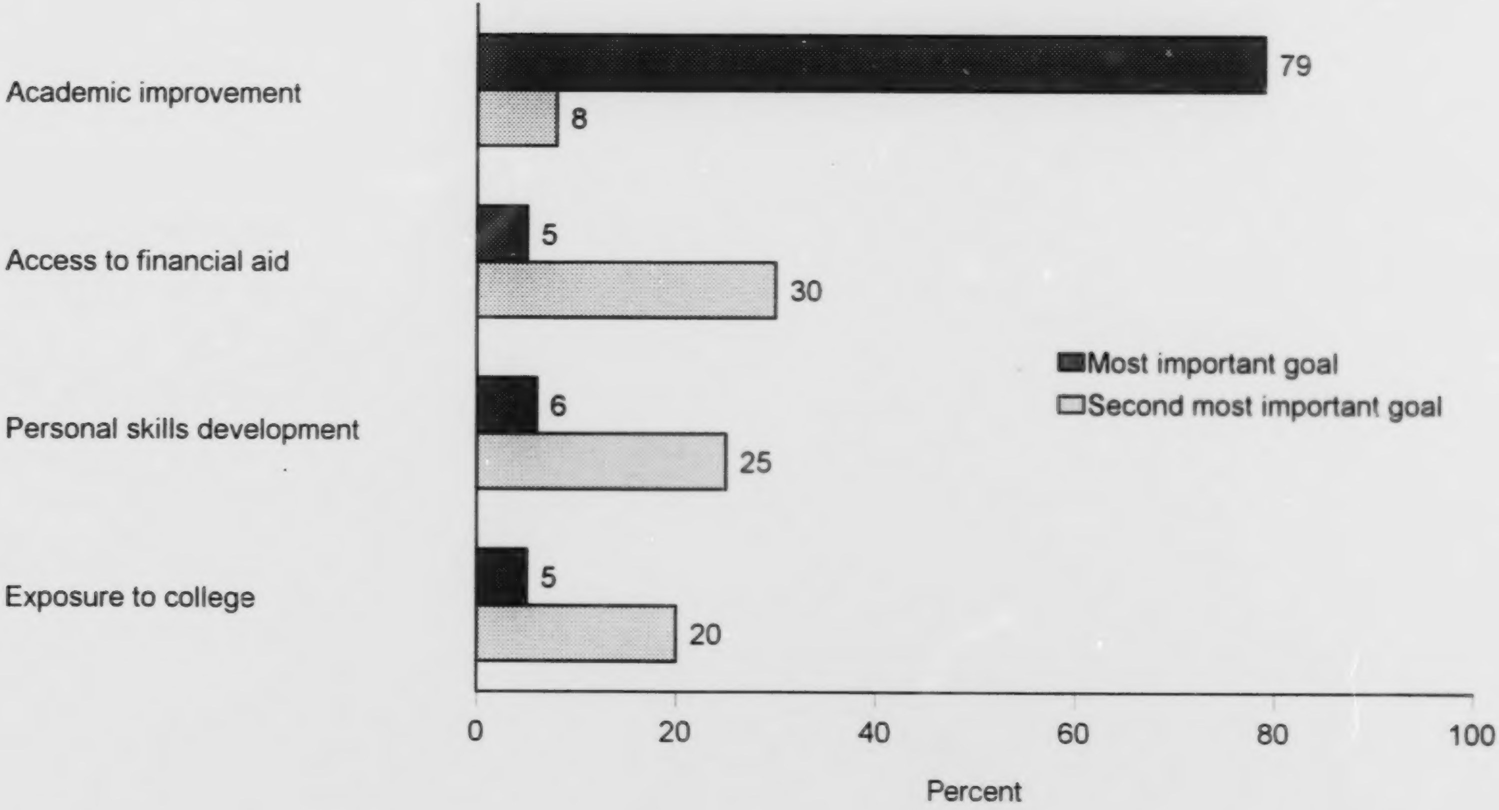
problems as the inability to adjust to college or difficulty in living away from home the primary reason for college failure, perhaps because many students who attend Upward Bound programs at two-year schools subsequently enroll in community colleges and live at home while in college. These differences persist even when we control for the influence of such other characteristics as location and size, but in neither case is the difference between the two project types greater than 10 percentage points.

It is important to note that directors' beliefs about the barriers participants face in college may reflect not only their perception of the deficiencies students bring to Upward Bound but their assessment of the progress students have made through their participation in the program. A director who believes that the academic instruction provided by the program will enable even the most ill-prepared participants to succeed in college, for example, may not consider insufficient academic preparation a major obstacle. The goals directors set for participants may therefore be a better indicator of the deficiencies they believe new participants bring to Upward Bound--and the obstacles these students could be expected to face if they were not in the program.

2. Program Goals

Project directors consistently emphasize academic improvement as a goal for participants (Figure III.1). This finding suggests that some projects have refocused their priorities since RTI conducted its evaluation in the mid-1970s. Although direct comparisons between the two surveys are complicated by differences in the wording of questions, an emphasis on academics appears to be more widespread today than it was in the past. Asked to rank the importance of various program functions, three-quarters of the directors who participated in the earlier survey ranked tutoring/remedial instruction (the only type of academic instruction about which they were asked) among their top three program emphases. By contrast, four-fifths of the directors who participated in the current survey report that helping students acquire the academic skills necessary to succeed in college is the single most important program goal; almost nine-tenths rank it among the top two. This focus on academic improvement may reflect federal priorities;

FIGURE III.1
PROGRAM GOALS



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although general, federal Upward Bound guidelines consistently emphasize development of academic skills as the primary goal of the program.

Project directors are more divided in the secondary goals they set for participants. Consistent with concerns about the obstacles presented by inadequate financial resources, 30 percent of project directors say that improving students' access to financial aid is their second most important program goal. Almost as many directors report a secondary emphasis on providing exposure to college (20 percent) or helping students develop such personal skills as the ability to adapt to new surroundings (25 percent). Improving students' relationships with teachers and peers is rarely a key focus: Very few project directors rank development of interpersonal skills, communication skills, or peer group support among the top two program goals. An even less common emphasis is development of employment skills.[1]

Program goals vary more than do directors' perceptions of the obstacles students face; differences among certain project types persist even when we control for other basic project characteristics through multivariate analysis. The reasons for these differences are unclear. Although our analyses controlled for the effects of such basic project characteristics as project location and years in operation, other unobserved characteristics that are correlated with host type, predominant student race/ethnicity, or project size may account for the differences in program goals reported by these project types.

- ***Differences by type of host institution.*** Projects based at four-year schools are more likely than those at two-year schools to report that academic improvement is the most important program goal (82 percent versus 63 percent).
- ***Differences by predominant student race/ethnicity.*** Academic improvement tends to be somewhat more important to directors of African American projects than to directors of Asian, Native American, and Latino projects. The latter are more likely to emphasize development of personal skills. One-fifth (20 percent) of Asian projects, compared with just 4 percent of African American projects, report that personal skills

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[1] It is difficult to say whether these goals have grown or diminished in importance since the RTI evaluation, as the earlier survey asked not about program goals, per se, but about the emphasis placed on various program functions (e.g., instruction, counseling, and cultural enrichment activities). Financial aid counseling was not among the functions listed.

development is the primary program goal. Almost one-third (31 percent) of Latino projects and one-half (46 percent) of Native American projects, compared with one-fifth (19 percent) of African American projects, report that developing personal skills is the second most important program goal. In contrast to other respondents, none of whom describe peer group support as a primary goal, a small fraction (13 percent) of the directors of Native American projects report that this is their most important program goal.

- *Differences by project size.* Directors of large projects are twice as likely as directors of medium-size projects (40 percent versus 18 percent) to rank exposure to college among the top two program goals.

B. INSTRUCTIONAL EMPHASES

- In the summer, two-thirds of all projects place a major emphasis on enrichment--instruction that goes beyond what students are learning in their regular high school classes.
- During the academic year, two-thirds of all projects emphasize support--instruction that parallels what students are learning in their regular high school classes.
- Only about one-fifth of all projects focus on remediation in either session.

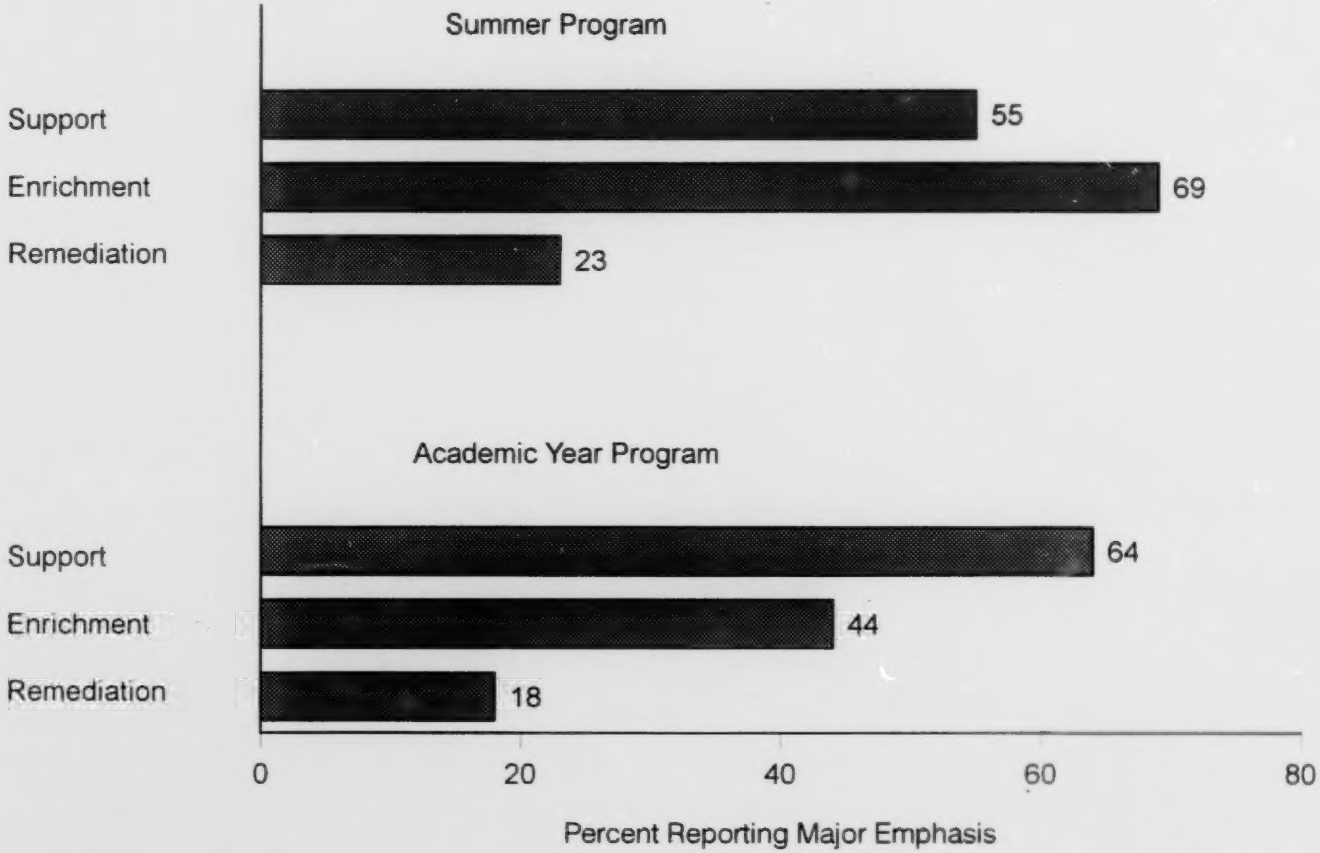
Projects necessarily approach their goals differently during the summer, when they are able to involve students intensively, than during the academic year, when there are other demands on participants' time. The survey asked project directors to indicate the degree of emphasis they place during each session on the following types of instruction:

- ***Support*** - Instruction that parallels what students are learning in their regular school courses
- ***Remediation*** - Instruction that concentrates on fundamental concepts and skills that were taught in earlier grades
- ***Enrichment*** - Instruction in concepts and material that goes beyond what students are exposed to in their regular school classes

Two-thirds of all projects place a major emphasis on support during the academic year (Figure III.2). An equal number emphasize enrichment during the summer. Few projects (9 percent), however, actually

FIGURE III.2

INSTRUCTIONAL EMPHASIS



shift their focus from support to enrichment. (Although 28 percent of projects add a major emphasis on enrichment during the summer, most of these projects emphasize support during both sessions or do not emphasize support during the academic year.) The majority of projects provide some remedial instruction, but only about one-fifth report a major emphasis on remediation during either the summer or the academic year.

Projects typically report multiple emphases at both times of the year, which suggests that programs are structured to both complement and supplement the instruction participants receive in their regular high school classes. These multiple emphases may also reflect an effort to address individual students' varying needs. Somewhat fewer than half of all respondents focus on only one type of instruction during either the summer (47 percent) or the academic year (45 percent). Those with an exclusive emphasis during the summer most frequently focus on enrichment (60 percent), while those with an exclusive emphasis during the academic year typically focus on support (69 percent).

C. ACADEMIC OFFERINGS AND REQUIREMENTS

- Most projects offer a broad range of courses but concentrate their requirements in the major academic disciplines of English, math, and science.
- Two-thirds of all respondents require a cluster of two English and three math courses: reading, writing, algebra I, algebra II, and geometry.
- The one subject area in which offerings and requirements tend to be sparse is social science.
- Projects offer a median number of 17 courses in the summer and 10 courses in the academic year and require a median number of 12 courses.
- Almost one-fifth of projects (17 percent) offer no formal coursework during the academic year.
- Compared with 20 years ago, projects operating today seem more likely to emphasize a traditional core curriculum and to offer a more extensive array of academic year courses.

An examination of projects' academic offerings and requirements yields two general impressions. First, projects vary considerably in terms of the number and combination of courses they offer and require, particularly during the academic year. Second, the modal program appears to be a rich, structured curriculum with varied electives and multiple requirements in English, math, and science. A cluster of two English and three math courses forms the core of most projects' academic programs. Eighty-eight percent of projects offer and 65 percent require these five courses: writing/composition, reading comprehension and vocabulary, algebra I, algebra II, and geometry. To this core of requirements, projects may add offerings and additional requirements in any number of subject areas. Most (89 percent of those that require this core, and 58 percent of all projects) add at least one science requirement. A surprising number of projects require students to complete coursework in such demanding subjects as physics (42 percent) or calculus (36 percent). As would be expected, a broader range of courses is offered during the summer component, when students participate in the program full-time, than during the academic year, when formal instruction is typically limited to once-a-week sessions after school or on weekends.

In this section, we examine projects' offerings and requirements with particular attention to differences between the summer and academic year components; differences related to such project characteristics as location, type of host institution, or the racial or ethnic composition of the student body; and changes over time. In the last part of the section, we cluster projects into four groups on the basis of their specific course requirements.

1. Overview

In the survey, project directors were asked about offerings and requirements in English, math, science, such nonacademic subjects as art and speech, social science, computers, foreign languages, and English as a second language (ESL). Table III.2 shows the percentage of projects that offer and require

TABLE III.2

ACADEMIC OFFERINGS AND REQUIREMENTS

	Percentage of Projects	
	Offerings	Requirements
English/Language arts		
Writing/composition	100	91
Reading comprehension and vocabulary	98	80
Literature	83	63
Other	13	9
Mathematics		
Pre-Algebra	82	63
Algebra I	96	79
Algebra II	95	76
Geometry	95	74
Pre-Calculus	80	49
Calculus	58	36
Other	24	12
Science		
Earth science	66	42
Biology	89	67
Chemistry	81	57
Physics	63	42
Other	19	10
Nonacademic		
Performing arts	53	15
Art	53	12
Journalism	52	12
Speech/public speaking	59	25
Physical fitness	69	35
Other	26	16
Computers		
Programming	47	18
Applications/software use	79	41
Other	6	3
Social science		
History	47	27
Geography	24	14
Sociology	17	9
Psychology	15	6
Government/civics	40	19
Other	13	6
Foreign language	35	10
English as a second language	11	6

NOTE: Courses may be offered or required in the summer, academic year, or both.

coursework in specific subjects in either the summer or academic year.[2] Of the 33 courses listed in the survey, 20 are offered by a majority of projects during either the summer or academic year. Nine are required by a majority of projects. It should be noted that the table reflects projects' offerings ***before*** new federal regulations went into effect requiring projects to provide instruction in mathematics through precalculus, laboratory science, foreign language, composition, and literature. (The regulations had been issued in draft form prior to the implementation of the survey, however, and may have prompted some projects to expand their curricula in anticipation of the new requirements.)

Projects offer a median number of 17 courses in the summer and 10 courses in the academic year. Offerings typically span a range of subject areas. As illustrated in Figure III.3, all or nearly all projects offer at least one English, math, science, or nonacademic course. Four-fifths offer at least one computer course, and two-thirds offer at least one social science course. In every area but computer instruction, the proportion of projects that offers three or more courses is greater than three-fifths.[3] Although social science is offered by fewer projects than any other subject, nearly all projects that offer one social science course offer three or more. The most commonly offered courses are in English and math: Over 90 percent of projects offer writing, reading, algebra I, algebra II and geometry, and over 80 percent offer literature, pre-algebra, and precalculus. Biology and chemistry are also offered by more than 80 percent of respondents.

Course requirements tend to be concentrated in the areas of English, mathematics, and science (Figure III.4). English is required by nine-tenths, math by more than three-fifths, and science by three-quarters. Of the nine courses required by a majority of projects, three are in English (writing, literature, and reading),

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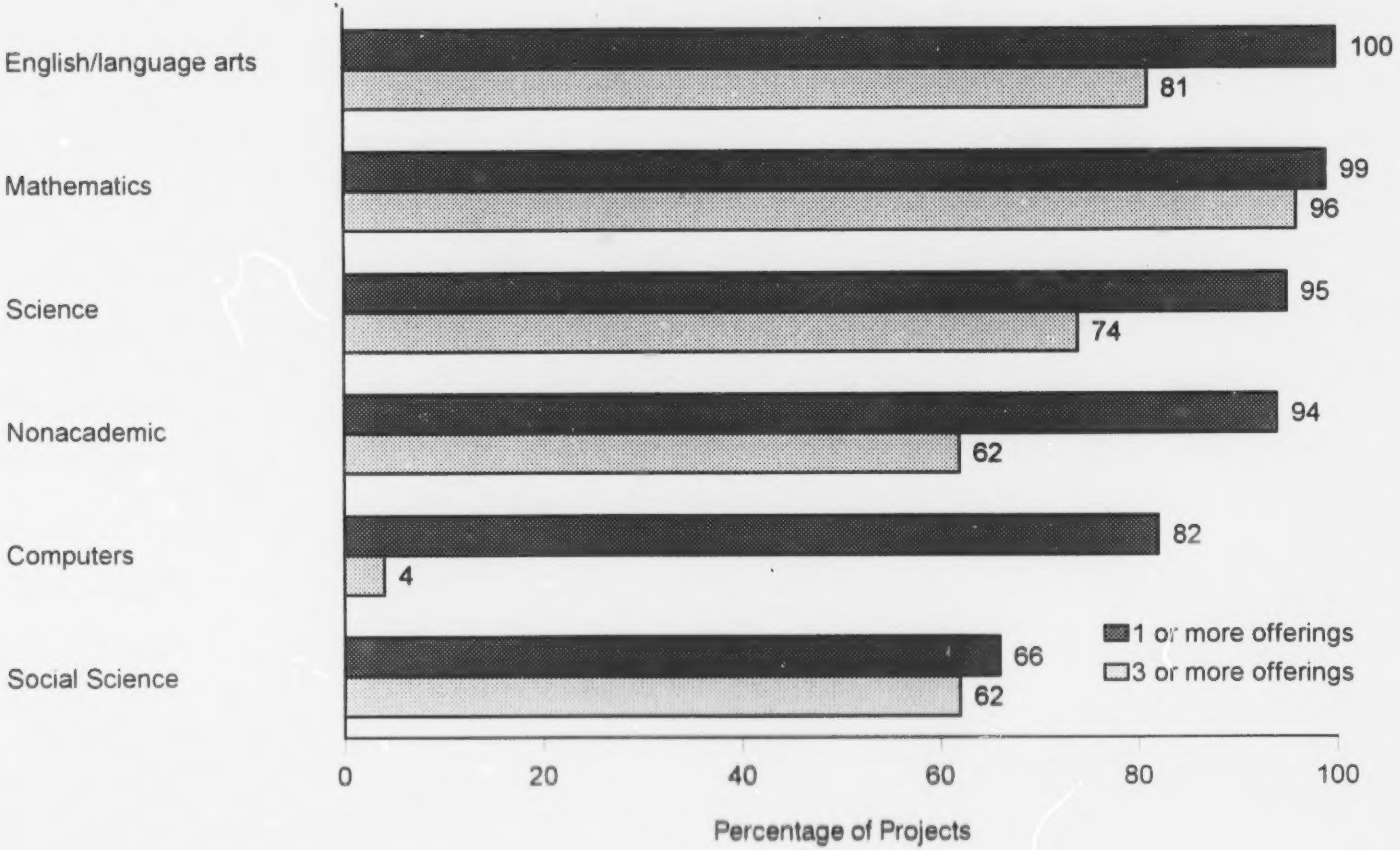
[2] Because respondents were not asked to specify whether courses were mandatory in the summer, academic year, or both, required courses that were offered in both sessions were assumed to be required in both sessions.

[3] Because the survey asked project directors to indicate whether they offer any instruction in a given subject (e.g, reading or history), rather than the number of classes offered in that subject, a simple count of the number of affirmative responses may understate the extent of coursework in certain subject areas. Instruction in such subjects as writing, for example, is probably provided throughout a student's participation in the program, rather than limited to a single class.

FIGURE III.3

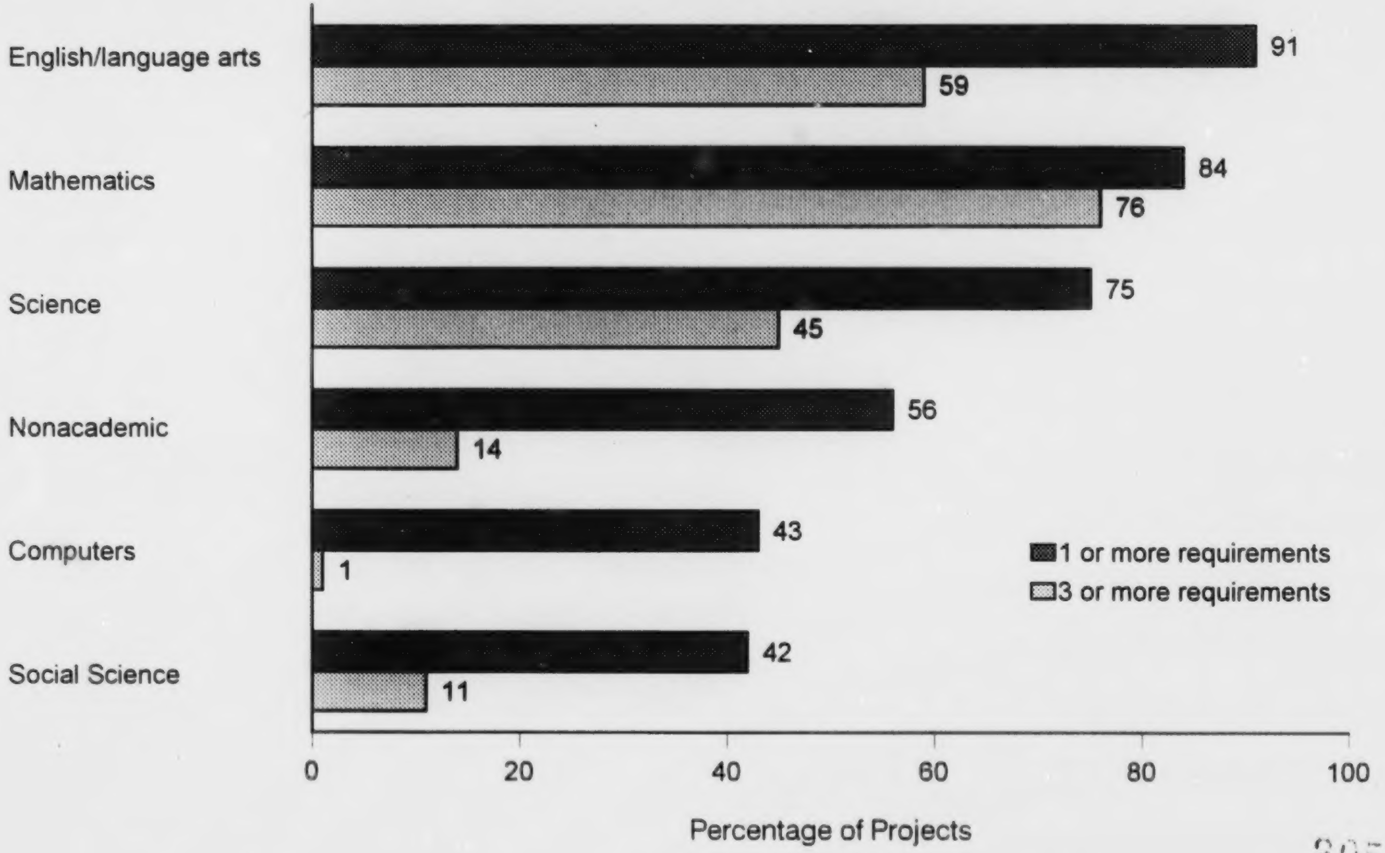
DEPTH OF ACADEMIC OFFERINGS



Note: Courses may be offered in the summer, academic year, or both.

FIGURE III.4

DEPTH OF ACADEMIC REQUIREMENTS



Note: Courses may be required in the summer, academic year, or both.

four are in math (pre-algebra, algebra I, algebra II, and geometry), and two are in science (biology and chemistry). Multiple requirements in each of these subject areas are typical: Most projects require three or more English and math courses, and nearly one-half require three or more science courses. Courses in other areas are more likely to be elective: Fewer than three-fifths of projects require any nonacademic courses, and only two-fifths require any computer or social science courses.

Most projects have fairly structured academic programs. Requirements are typically almost as numerous as offerings. (The median number of courses required is 12.) Nearly all English and math courses are required by at least three-quarters of the projects that offer them. Among the few exceptions are precalculus and calculus, which are required by about two-thirds of the projects that offer these courses. All of the science courses listed are required by most (one-half to three-quarters) of the projects that offer them. Half of the social science courses and all of the nonacademic courses listed in the survey are required by two- to three-fifths of the projects that offer these courses. If we assume that any required course that is offered in the summer is required during that session (rather than just during the academic year), we find that 72 percent of projects require at least one-half of the courses that are offered, and 41 percent require at least three-quarters of their offerings. What this means in terms of the number of electives students are permitted to take each year is not clear, since the total number of courses students take during the summer (and thus the time available for electives) varies from project to project.

Table III.3 provides more specific information about projects' offerings and requirements in six general subject areas: English, math, computers, science, nonacademic subjects, and social science.

2. Summer and Academic Year Components

As would be expected, projects tend to offer a wider array of courses during the summer than during the academic year. Four-fifths (83 percent) of projects offer 14 or more courses during the summer; nearly one-fifth (17 percent) offer 20 or more. During the academic year, three-fifths offer 12 or fewer courses,

TABLE III.3

SYNOPSIS OF ACADEMIC OFFERINGS AND REQUIREMENTS

English	• All projects offer at least two English courses during the summer or academic year. • The median number of English courses offered is three during the summer and two during the academic year. • Reading and writing are the two most frequently offered of all courses during both the summer and the academic year, as well as the two most frequently required. The combination of reading and writing is offered during the summer by 96 percent of projects and during the academic year by 67 percent. Four-fifths (79 percent) of projects require both courses. • 81 percent of projects offer reading, writing, and literature at some point during the year. Three-fifths (58 percent) require all three.
Mathematics	• 94 percent of projects offer at least four math courses during the summer or academic year. One-half offer six or seven. • The median number of math courses offered is five during the summer and four during the academic year. • 72 percent of projects offer five or more math courses during the summer. The breadth of projects' math offerings varies more in the academic year component: 61 percent of projects offer four or more math courses, while 34 percent offer none. • 45 percent of projects require five or more math courses. 16 percent require none. • The combination of algebra I, algebra II, and geometry is offered by 89 percent of projects during the summer and 60 percent during the academic year. 70 percent require all three. • Calculus or precalculus is offered during the summer by 77 percent of projects and during the academic year by 51 percent. 50 percent of projects require one or the other.
Computers	• 83 percent of projects offer at least one computer course. 44 percent offer at least two. • The median number of computer courses offered is one during the summer and zero during the academic year. • 70 percent of projects offer two or three computer courses during the summer. In the academic year, 57 percent offer none, and 24 percent offer just one. • 43 percent of projects require no computer instruction. Software use is more frequently offered and required than programming.

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Science	• 74 percent of projects offer at least three science courses during the summer or academic year. • The median number of science courses offered is three during the summer and one during the academic year. • 60 percent of projects offer three or more science courses during the summer. As with math, the breadth of projects' science offerings varies more in the academic year component: 45 percent of projects offer no science at all, while 39 percent offer at least three courses. • 45 percent of projects require 3 or more science courses. 26 percent require none. • The combination of biology and chemistry is offered by 72 percent of projects during the summer and 46 percent during the academic year. 46 percent require both courses. • A substantial minority of projects report extensive science offerings or requirements. 31 percent of projects offer earth science, biology, chemistry, and physics during the summer. 27 percent offer all four courses during the academic year, and 27 percent require all four.
Nonacademic	• 94 percent of projects offer at least one nonacademic course. 62 percent offer three or more. • The median number of nonacademic courses offered is three during the summer and zero during the academic year. • 62 percent of projects offer three or more nonacademic courses during the summer; 93 percent offer at least one. In the academic year, 58 percent offer none, and 81 percent offer no more than one. • The most frequently offered and required nonacademic courses are physical education and speech. Physical education is offered by 69 percent and required by 35 percent.
Social science	• 75 percent of projects offer fewer than three social science courses during the summer or academic year. 32 percent offer none. • The median number of social science courses offered is zero during both the summer and academic year. • 56 percent of projects offer one to three social science courses during the summer; 38 percent offer none. In the academic year, 65 percent offer none. • 59 percent of projects require no social science. 89 percent require two or fewer social science courses. • History and government are the most frequently offered and required social science courses, but neither is offered by even one-half the projects nor required by even one-third.

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and two-fifths offer fewer than 9. With few exceptions, the likelihood of any given course being offered is at least 50 percent greater during the summer than during the academic year. As shown in Table III.4, 18 courses are offered by a majority of projects during the summer; five are offered by more than nine-tenths. During the academic year, the number of courses offered by a majority of projects drops to eight, all of which are in the areas of English, math, or science.

The academic year component also differs from the summer in the degree of variability among projects. In the summer component, most projects offer about the same number of courses; in terms of total offerings, two-thirds of the projects are clustered within two or three courses of the median, offering 14 to 19 courses. But in the academic year, almost one-fifth (18 percent) of projects offer 17 or more courses, while an equal number (17 percent) offer none. In the comments section of the survey, one project director offered this description of the approach taken by the latter group of projects:

> During the academic year, our focus is individual and small group tutoring in academic classes our students are taking in high school. The tutoring includes study skills development and weekly academic and personal goal setting. Monthly Saturday programs focus on group dynamics, self-awareness and cultural awareness.

The variation in academic year offerings may be even greater than it appears. In general, the survey data about academic offerings and requirements must be interpreted with some caution, as the quality, intensity, and level of instruction may vary from project to project. Variations in intensity, measured in terms of the number of hours devoted to a subject, are likely to be greater during the academic year, when the number of hours per week students meet with instructors may vary widely, than during the summer, when students generally participate full-time for the same number of weeks. (One can easily imagine, for example, that one project's academic year offering in chemistry might consist of a weekly two-hour session complete with lab work, while another project might simply make tutoring available to students who ask for it.)

TABLE III.4

COURSES OFFERED BY MAJORITY OF PROJECTS

	Percentage of Projects	
Course	Summer	Academic Year
Writing/composition	98	75
Reading comprehension and vocabulary	96	70
Literature	80	53
Pre-Algebra	75	54
Algebra I	94	63
Algebra II	93	64
Geometry	94	63
Pre-Calculus	76	
Calculus	51	
Earth science	56	
Biology	86	50
Chemistry	76	
Physics	60	
Performing arts	52	
Art	52	
Speech	54	
Physical fitness	68	
Applications/software use	69	

3. Variation Across Projects

Much of the variation in projects' academic programs appears to be idiosyncratic. But other differences are closely correlated with project size, location, years in operation, or predominant student race or ethnicity.

- ***Differences by size.*** Large projects tend to offer more courses than medium-size projects.[4] The median number of courses offered by large projects is 19 in the summer and 13 in the academic year, compared with 16 and 9 for medium-size projects. One-third (32 percent) of large projects, compared with 13 percent of medium-size projects, offer 20 or more courses during the summer. Large projects are more likely to offer advanced math and a variety of nonacademic courses. Calculus and precalculus are offered by 95 percent and 76 percent of large projects, respectively, compared with 75 percent and 53 percent of medium-size projects. Performing arts, art, and journalism are offered by 70 to 73 percent of large projects, but just 43 to 45 percent of medium-size projects. Large projects are also more likely to require these courses and to offer physical education.

- ***Differences by years in operation.*** New projects (those in operation for three to five years) are more likely than those in operation for more than 20 years to offer and require most social science courses. Geography, sociology, and psychology are offered by 44, 43, and 37 percent of new projects, respectively, but by just 17, 8, and 9 percent of old projects. These courses are also more commonly required by new than old projects. Projects in operation for six to twenty years are more likely than the oldest projects to require a variety of math, science, and English courses (algebra I, algebra II, geometry, physics, biology, writing, literature and reading), but with the exception of literature, the differences in the percentages that offer these courses are small (less than 14 percentage points).

- ***Differences by location.*** Rural projects are more likely than urban to offer a very limited academic year program but also to require certain nonacademic courses. While the median number of courses offered during the summer is higher for rural projects than for urban (18 versus 16), the reverse is true during the academic year, when rural projects offer a median number of 4 courses to urban projects' 12. Rural projects are, however, more likely to require performing arts (24 versus 11 percent), art (24 versus 6 percent), journalism (22 versus 6 percent), speech (30 versus 23 percent), and physical education (47 versus 29 percent).

- ***Differences by predominant student ethnicity.*** White and Native American projects are far more likely to provide no formal instruction during the academic year than are

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[4] The relationship between size and number of offerings is not linear: Small projects typically offer more courses than medium-size, although differences in the percentages that offer specific courses are not statistically significant.

African American projects (which constitute the majority of projects). All Native American projects and 42 percent of white projects, compared with just 2 percent of African American projects, report offering no courses during the academic year. The location of many white and Native American projects in remote rural areas may explain these differences.

Asian and Native American projects are less likely than African American projects to offer or require a foreign language but more likely to offer English as a second language. Thirty-nine percent of African American projects, compared with just 9 percent of Asian projects and none of the Native American projects, offer foreign language instruction. But English as a second language is offered by 52 percent and 13 percent of Asian and Native American projects, respectively, compared with just 7 percent of African American projects.

Racially/ethnically diverse projects are distinguished by their highly structured academic programs. Seventy-four percent of these projects, compared with 44 percent of African American projects, require at least three-quarters of their course offerings. Sixty-four percent of racially/ethnically diverse projects, compared with 21 percent of African American projects, require 16 or more courses. In terms of specific courses, racially/ethnically diverse projects are more likely than African American projects to require precalculus (75 versus 50 percent), computer programming (51 versus 16 percent), software use (75 versus 37 percent), performing arts (43 versus 11 percent), art (60 versus 8 percent), journalism (50 versus 7 percent), and physical education (69 versus 30 percent).

4. Changes in Academic Offerings Since the 1970s

Differences between the RTI survey instrument and the current one prevent most direct comparisons of offerings across the 20-year period separating the two studies. But the few comparisons we can make suggest that today's projects may be somewhat more likely than their predecessors to emphasize a traditional "core curriculum" that includes English and science and to offer a more extensive array of courses during the academic year.

In the 1970s, researchers at RTI defined the "typical" Upward Bound summer component as one that offered math, composition, history, personal communication, literature, and reading, along with electives in the arts, sports, drama, and crafts. The researchers also noted that opportunities for work in science were very limited. Today, biology and chemistry are among the 10 most frequently offered summer courses; earth science and physics are also offered by most projects. Social science and art, however, are now less commonly offered. The percentages of projects offering social science and art during the summer has dropped from 68 to 40 percent and from 84 to 54 percent, respectively.

A few observations in the RTI report suggest that, in general, academic year offerings were more limited in the 1970s than they are today. The characterization of one project's academic year curriculum of two math courses, three social science courses, English composition, and vocabulary as "a wide range of offerings," for example, indicates that projects typically offered fewer than seven courses during the academic year. Only about a third offer that few today. In terms of specific courses, the percentage of projects offering reading instruction during the academic year has increased slightly, from 59 to 70 percent. The percentage offering writing instruction also appears to have grown: While no more than 58 percent of projects surveyed by RTI reported offering any English course other than reading during the academic year, 75 percent of the projects we surveyed report offering English composition during this component.

5. Four Project Types

On the basis of differences in projects' English and math requirements and the total number of courses required, we have clustered projects into four groups. Table III.5 lists and defines these four project types. The first group, constituting just over a third of respondents (37 percent) provides what we term a ***strong math/science program***. These projects require advanced math (pre-calculus or calculus) and several science courses. The second group (32 percent) provides what we call a ***foundational program***, requiring the five basic English and math courses required by two-thirds of all projects (reading, writing, algebra I, algebra II, and geometry), but ***not*** the combination of higher level math and multiple science courses required by the first group. (Nearly all of the projects with a strong math/science program also require the five basic English and math courses, so the real distinction between these two groups lies in the combination of advanced math and several science courses that is required by the first group but not the second). The third group (15 percent) mandates neither the foundational nor the math/science curriculum, but requires participants to take at least six courses, providing what we call an ***other structured program***.

TABLE III.5

ACADEMIC REQUIREMENTS: FOUR PROJECT TYPES

- **Strong Math/Science Program (37 percent)**
    - Require calculus or pre-calculus, at least 3 science courses, and a total of at least 6 courses

- **Foundational Program (32 percent)**
    - Require reading, writing, algebra I, algebra II, geometry, and a total of at least 6 courses, but *not* the math/science curriculum

- **Other Structured Program (15 percent)**
    - Require at least 6 courses but neither the foundational nor the math/science curriculum

- **Unstructured Program (17 percent)**
    - Require fewer than 6 courses and neither the foundational nor the math/science curriculum

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The fourth group (17 percent) offers an ***unstructured program***, requiring fewer than six courses. (About 3 percent of projects provided too little information to be categorized and hence were eliminated from this analysis.)

Any categorization of projects on the basis of their academic requirements is necessarily somewhat arbitrary; one might, for example, develop an alternative typology based on the highest level of math required or the diversity of course offerings. This particular grouping of projects is useful primarily in that it offers a simple way to summarize differences in requirements. These variations in requirements are correlated with few project characteristics. The few differences we do see relate to the structure of the academic year component, program goals, and instructional emphases. Unstructured programs are more than twice as likely as others to report offering no courses during the academic year (40 percent versus 8 to 15 percent). The median number of courses offered during the academic year by these programs is 8, compared with 14 for strong math/science programs and 9 for foundational and other structured programs.

Projects vary little in terms of their focus on academic improvement as a program goal, but unstructured and other structured programs are slightly more likely than strong math/science programs to report other objectives. Twenty-three percent of other structured programs and 17 percent of unstructured programs, compared with 6 percent of math/science programs, do not rank academic improvement among their top two goals. In terms of instructional emphasis, other structured programs are more likely than unstructured and foundational to report a major emphasis on remediation during the summer component. (Forty-two percent of other structured programs report this emphasis, compared with 12 percent of foundational programs and 17 percent of unstructured program.) Other structured programs are also somewhat less likely than unstructured and foundational to report a major emphasis on support (instruction that parallels students' regular high school coursework) during the summer; the percentages for the three groups are 5, 39, and 21 respectively.

D. SUPPORT SERVICES

- With the exception of job placements, which are offered by just under half of all projects, each general type of support service identified in the survey (e.g., academic assistance, career advisement, test preparation) is offered during the summer or academic year by at least 97 percent of projects.

Projects typically provide a broad array of services to help students prepare for college.[5] Table III.6 shows the percentage that report offering specific services or activities in nine general areas: academic assistance, financial aid planning, personal development, career planning, field trips, preparation for college living, college application assistance, test preparation, and job placement.

Nearly all projects provide at least one offering in all but one of the nine general areas. The lone exception is job placement, which is offered by only half (49 percent) of all projects during either the summer or the academic year. Even fewer projects (18 percent) report that they help students find jobs through more than one job-placement program; the vast majority of those that assist with job placement work only with their local Job Training Partnership Act (JTPA) program.

By contrast, projects typically provide multiple offerings in each of the other eight service areas. At least 90 percent of projects provide all of the services listed in the categories of academic assistance, financial aid planning, and college preparation. These services include tutoring, study skills development, financial aid counseling, help identifying potential sources of financial aid, assistance with financial aid applications, courses in adjusting to college living, and visits to college campuses. Almost three-quarters (73 percent) of projects prepare students for both levels of college entrance exams (e.g., the PSAT and SAT). Two-thirds (69 percent) offer five or six personal development courses or services, and another

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[5] The regulations governing Upward Bound list several specific examples of the types of services projects may offer. These include personal counseling; academic advice and assistance in high school course selection; tutorial services; exposure to cultural events, academic programs, and other activities not usually available to disadvantaged youth; and activities designed to acquaint students with the range of career options available to them.

TABLE III.6

SUPPORT SERVICES

	Percent
Academic assistance	
Academic counseling	100
Tutoring	97
Study skills development	97
Financial aid planning	
Counseling	99
Identifying sources	100
Application assistance	100
Personal development	
Personal counseling	100
Cultural awareness seminars	100
Nutrition/health/substance abuse seminars	93
Group dynamics	89
Family counseling	77
Other self-awareness seminars	31
Career planning	
Counseling	100
On-campus meetings with employers or career representatives	78
Site visits to employers or job shadowing	59
Field trips/travel	
Day or less	96
Weekend	82
Week or more	35
Preparation for college	
Courses in adjusting to college living	92
Campus visits	98
College application assistance	99
Test preparation	
ACT/SAT	97
PSAT/PLAN/PACT	73
Work Experience	49
JTPA placements	
Placements through other partnerships	
Work-study placements	

NOTE: The percentages shown are the percentages of projects that report offering a service or activity during the summer, academic year, or both.

quarter (26 percent) offer four. The most commonly offered of these services are personal counseling and seminars focused on cultural awareness, group dynamics, and nutrition, health, or substance abuse. Close to half (48 percent) of all projects provide all three kinds of career planning assistance, and another two-fifths (42 percent) provide two. Career counseling, presumably by project staff, and on-campus meetings with employers or career representatives are somewhat more common than site visits to employers.

Although projects appear to be remarkably similar in terms of the breadth of support services they offer, the intensity and quality of these services may vary considerably. Projects that report offering financial aid counseling, for example, may meet with individual students and their parents on multiple occasions to discuss options for financing college, or they may simply offer a workshop or two. The number of campus visits, field trips, and visits to job sites may also vary. Because the survey gathered no detailed information about particular services, we can draw only limited conclusions about this program component--specifically, that projects that report offering a service devote at least some resources to it.[6]

Despite this limitation of the data, certain general observations can be made about projects' emphases:

- ***Experiences beyond the classroom.*** Almost all projects provide opportunities for students to attend cultural events and explore college and work settings. Nearly all projects (96 percent) arrange day trips, usually during both the summer and the academic year. An almost equal number (82 percent) arrange weekend trips, many (55 percent) during the academic year. A substantial minority of projects (34 percent) arrange trips of a week or more in length at some point during the year; 19 percent arrange trips of this length during the school year. Ninety-eight percent arrange for students to visit one or more colleges during the year, and 58 percent provide opportunities for students to explore career options through visits to job sites.

- ***Early planning for college.*** Projects typically encourage students and their parents to begin thinking about and planning for college well in advance of enrollment. Fifty-six percent of the projects that offer financial aid counseling make it available to students in all grades, and 78 percent of those that arrange campus visits allow even the youngest students to participate. Half (52 percent) of the projects that prepare students for the ACT or SAT make this training available to students in all grades, even though students usually do not take these exams before the end of the 11th grade.

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[6] Information about the intensity of services will be collected from the 68 projects participating in the effectiveness study.

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- ***Family services.*** A surprisingly large fraction of projects (77 percent) offer counseling not only to students but to their family members.

- ***Different emphases in the summer and academic year.*** Projects tend to provide a broader range of services and activities during the summer than during the academic year. (Opportunities for work experience, in particular, are more widely available during the summer, when placement assistance is offered by 46 percent of projects, than during the academic year, when placement assistance is offered by only 18 percent.) Assistance with college applications and financial aid forms, however, is more often timed to coincide with colleges' winter/spring application deadlines. Help identifying potential sources of financial aid, for example, is offered during the summer by 77 percent of projects, but during the academic year by 99 percent.

- ***Varying opportunities for work experience.*** The federal regulations governing Upward Bound do not include job placement among the examples of services projects may offer. Moreover, there is a long-held view that after-school and summer jobs compete with students' schoolwork and reduce the time available for studying. Hence, it is hardly surprising that half of all projects report that they do not assist with job placements. Conversations with project directors who have chosen to help students find work suggest that this assistance is often offered in an effort to make Upward Bound more relevant to students' future careers and to eliminate financial pressures that may cause students to drop out of the program. Whether project-related work experience is available to students appears to depend in part on the location of the project. Urban projects are almost twice as likely as rural to help students get JTPA placements (49 percent versus 29 percent).

Whether the level or variety of services offered by projects has changed significantly since the RTI evaluation is difficult to determine. Because the earlier study focused on a different group of services, we can make few comparisons across the two surveys. One notable difference is in the proportion of projects that help students find work during the academic year, which has dropped dramatically, from 65 to 18 percent. The percentage of projects that offer individual counseling, academic advice, or help applying for financial aid is about the same today as it was in the mid-1970s.

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IV. DELIVERY METHODS

To round out our picture of students' academic experience in Upward Bound, we asked project directors a series of questions about the methods of instruction and approaches to subject content used, the frequency of written performance evaluations, and opportunities students for to earn high school or college credit for their work in the program. We also asked about the involvement of parents and target school staff in program planning and activities.

In general, the data suggest that projects tend to favor the kinds of instructional methods commonly used in high school and college courses over less traditional methods, such as individualized instruction and independent study. Students are typically evaluated a few times a year and are more likely to earn college than high school credit for their work in Upward Bound. The extent to which projects involve participants' parents and target school staff in the program is difficult to determine, but the evidence suggests that only a small proportion of projects actively encourage a high degree of involvement.

A. METHODS OF INSTRUCTION

- Most projects instruct students in both small groups and large lecture-style classes during the summer and the academic year. Most also require lab work and assign homework during the summer. But individualized instruction, independent study, team teaching, and computer-based instruction are considerably less common.
- The methods of instruction projects use are highly correlated with their instructional emphases. Projects with a remedial focus, for example, are more likely than others to provide frequent individualized instruction.

In this section, we investigate how projects present academic material to students and the extent to which methods of instruction vary across projects. Virtually all techniques are used by the majority of

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projects at least occasionally during each session.[1] (The single exception is lab work, which is offered during the academic year by just under half of all respondents.) Relatively few methods, however, are used frequently by the majority of projects. Small group instruction, large lecture-style classes, and homework assignments are very common, but most other methods of instruction are used frequently by only a minority of projects (Figure IV.1).

A large majority of projects instruct participants in small groups during both the summer and the academic year. Lecture-style classes are held by somewhat smaller proportions of projects during either session. Lab work is fairly common during the summer session, but is seldom scheduled during the academic year, perhaps because projects lack access to laboratory facilities while school is in session. About three-quarters of projects assign homework frequently during the summer session; almost a third do so during the academic year. By contrast, fewer than a third report frequent use of individualized instruction, independent study, team teaching, or computer-based instruction.

Projects may group participants in a variety of ways for small group instruction (Figure IV.2). During the summer session, the most common approach is to group students by proficiency level, rather than by grade. (No approach is more common than any other during the academic year.) Just over half the projects that report frequent use of any type of small group instruction favor one approach to grouping students over others. During the summer, 25 percent group students only by proficiency level, 13 percent group students only by grade, and 13 percent only combine students of diverse proficiencies. During the academic year, somewhat fewer projects (15 percent) group students only by proficiency level, and somewhat more (22 percent) group students only by grade.

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[1] Projects' methods may diverge more than is evident from the survey data, since the terms used in the survey could be interpreted differently by different respondents. (The activities that could reasonably be characterized as "individualized, self-paced instruction," for example, span a considerable range, encompassing everything from one-on-one tutoring to the assignment of worksheets for students to complete on their own.)

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FIGURE IV.1

METHODS OF INSTRUCTION

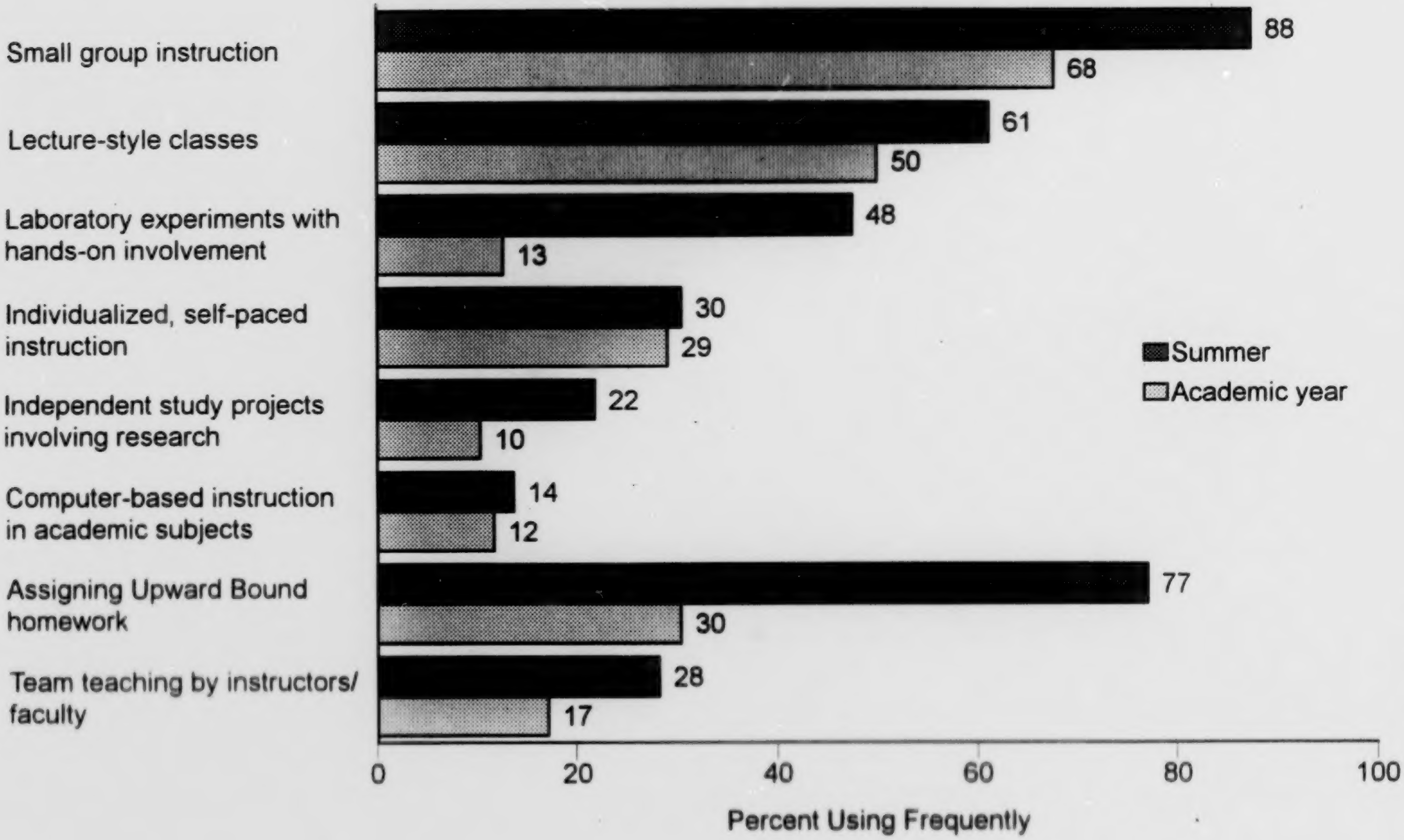
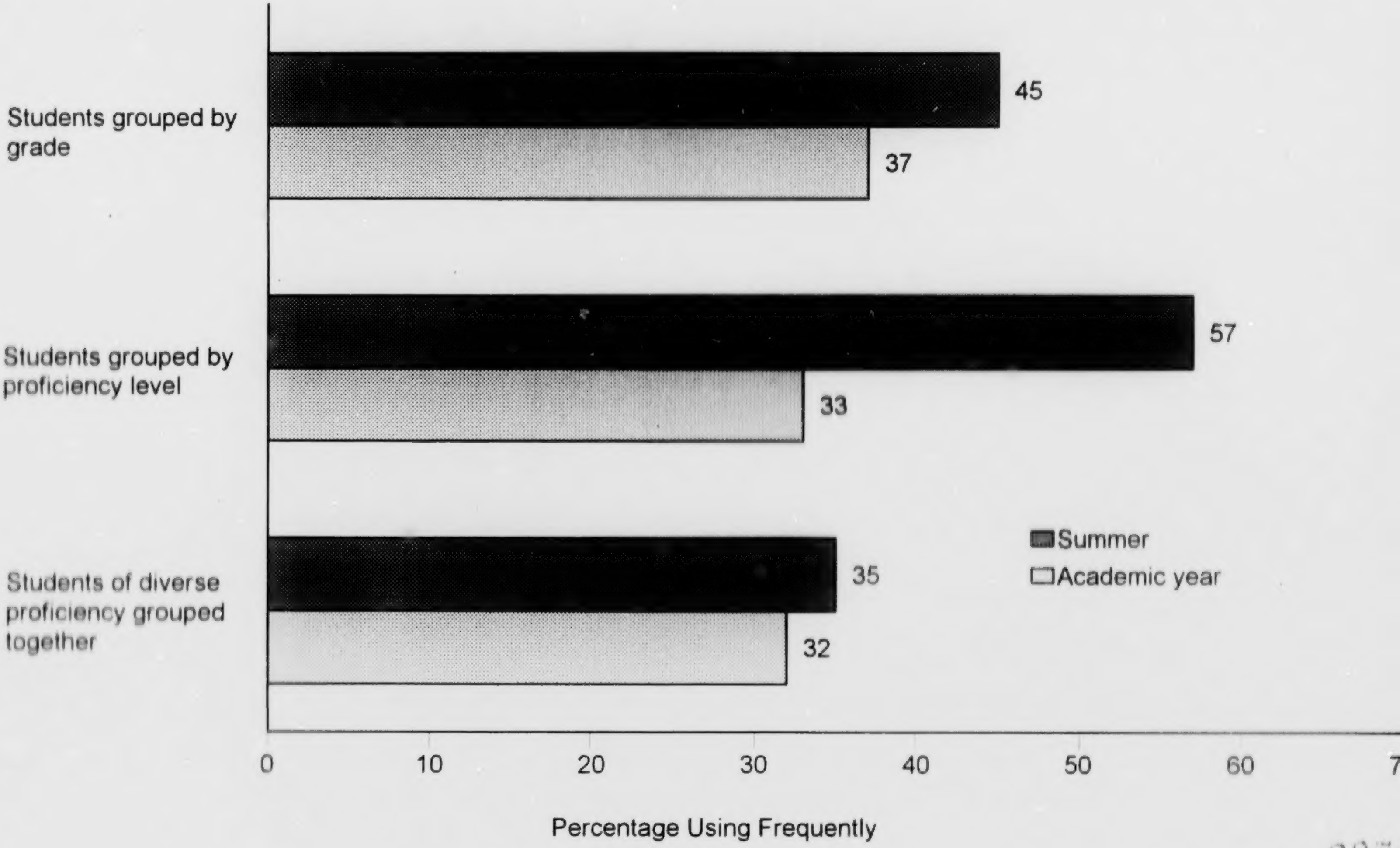


FIGURE IV.2

SMALL GROUP INSTRUCTION



As would be expected, projects tend to use a greater variety of teaching techniques during the summer component than during the academic year, when participants typically meet with instructors only once a week. Sixty percent of respondents report using two or fewer methods frequently during the academic year. By contrast, over half (55 percent) use four or more different methods frequently during the summer, and over a quarter (29 percent) use five or more. The combinations of methods projects employ during the summer vary widely, however, and few methods are consistently paired.

The methods of instruction projects use are highly correlated with their instructional emphases. In general, projects that emphasize instruction that goes beyond the material students are covering in their regular high school classes (enrichment) are more likely than others to require students to work independently, while those that emphasize instruction in fundamental concepts and skills that were taught in earlier grades (remediation) are more likely to have students to work closely with instructors. Projects that emphasize enrichment during the summer component, for example, are more likely than other project types to frequently arrange for students to do hands-on work in the lab and more likely than most to frequently assign independent research projects; only projects with several emphases do so as often (Table IV.1). Projects that emphasize remediation are more likely than all but those that emphasize support alone to instruct students in small groups, and more likely than all but those with several emphases to provide individualized instruction. Similar patterns emerge in the academic year (Table IV.2). Projects that report a remedial focus during this session are also more likely to assign Upward Bound homework to students, perhaps in an effort to bring their work up to grade level more quickly.

For the most part, instructional methods do not vary substantially with such project characteristics as location, size, or age. But projects based at two-year schools are somewhat more likely than those at four-year schools to provide individualized instruction frequently during the summer component and are two to three times more likely to offer computer-based instruction frequently during the summer and academic year. Projects hosted by two-year colleges are also twice as likely to frequently enlist college faculty as

TABLE IV.1

METHODS OF INSTRUCTION USED FREQUENTLY BY PROJECTS WITH VARIOUS INSTRUCTIONAL EMPHASES: SUMMER COMPONENT

	Instructional Emphasis			
	Enrichment or Enrichment/Support	Remediation or Remediation/Support	Support Only	Several or No Emphases
Small group instruction		+	+	
Laboratory experiments with hands-on involvement	+			
Independent study projects involving research	+			+

NOTE: Plus signs indicate a greater tendency to use an instructional method. Differences are significant at the 0.05 level.

TABLE IV.2

METHODS OF INSTRUCTION USED FREQUENTLY BY PROJECTS WITH VARIOUS INSTRUCTIONAL EMPHASES: ACADEMIC YEAR COMPONENT

	Instructional Emphasis			
	Enrichment or Enrichment/Support	Remediation or Remediation/Support	Support Only	Several or No Emphases
Small group instruction		+	+	
Individualized instruction		+		
Laboratory experiments with hands-on involvement	+			
Assigning Upward Bound homework		+		

NOTE: Plus signs indicate a greater tendency to use an instructional method. Differences are significant at the 0.05 level.

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lecturers, though the proportion of projects that does so is still modest (19 percent, compared with 9 percent for projects at four-year schools). These differences between project types persist even when we control for other project characteristics.

B. APPROACHES TO SUBJECT CONTENT

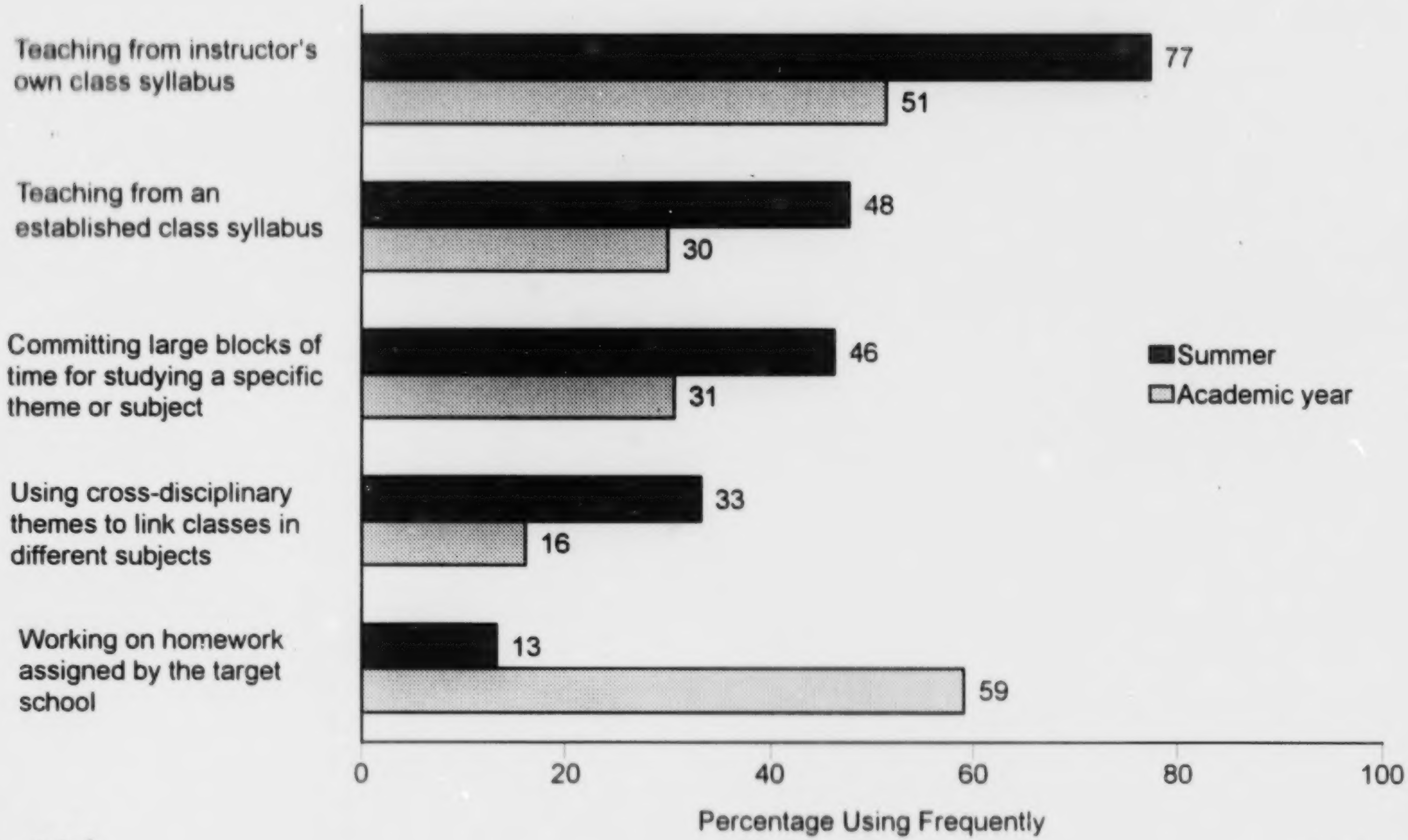
- Projects tend to take conventional approaches to subject content. More innovative techniques, such as the use of cross-disciplinary themes to link courses in different subjects, are used frequently by only a minority of projects.
- Instructors most frequently design their own courses. But established course syllabuses are also commonly used.

Whether working with students in small groups, large lecture classes, or on an individual basis, project staff may approach subject content in a variety of ways--devoting large blocks of time to a single subject, for example, or weaving common themes through courses in different subjects. In the survey, project directors were asked about the frequency with which instructors employ various approaches during the summer and the academic year. Their responses indicate that nearly all approaches are employed at least occasionally by most projects. But as with instructional methods, few approaches are used frequently by a majority of projects (Figure IV.3). Not surprisingly, projects employ a broader range of techniques during the summer than during the academic year, when the focus tends to shift toward helping participants with homework assigned by the target schools.

Most projects seem to follow the standard high school model, providing regular instruction in a range of subjects and only occasionally attempting to link subject matter in different courses through cross-disciplinary themes. Just under one-half of all respondents (46 percent) report that participants often devote large blocks of time to a single subject during the summer component; one-third report that instructors frequently use cross-disciplinary themes to link classes in different subjects during this component. These approaches are used less frequently during the academic year.

FIGURE IV.3

APPROACHES TO SUBJECT CONTENT



Small projects are more likely than large to focus on a single subject for an extended period, perhaps because such an activity is more easily organized with a small group. About two-thirds (68 percent) of small projects frequently commit large blocks of time to a specific subject during the summer, compared with about a third (32 percent) of large projects. Racially/ethnically diverse projects are also more likely than the majority of projects to use unconventional techniques. Seventy-one percent of racially/ethnically diverse projects, compared with 28 percent of African American projects, use cross disciplinary themes frequently during the summer program. And 79 percent of the former, compared with 43 percent of the latter, report that they frequently focus on a single subject. These variations cannot be explained by differences in such basic project characteristics as size or host type, but may reflect underlying differences between these project types that were not captured in our multivariate analyses.

Instructors most frequently design their own courses: About three-quarters of all project directors report that instructors often teach from their own class syllabuses during the summer; almost one-half report that instructors do so during the academic year. But instruction from an established class syllabus is also common during the summer component. (Respondents were not asked about the sources of these course outlines, but projects may develop them in committee or obtain them from high school staff or former Upward Bound instructors who were thought to be particularly effective teachers.) The use of existing course outlines does not preclude development of new ones: About two-thirds of those who report that instructors frequently use established syllabuses also report that instructors often develop their own.

Projects' instructional emphases appear to influence the approaches they adopt (Table IV.3). Those that place a major emphasis on remediation during the summer program, for example, are the most apt to report that instructors frequently develop their own class syllabus, perhaps because remediation is thought to require instruction specifically tailored to the needs of a particular group of students. Projects that focus on enrichment during the summer component are more likely than most to report that instructors often adopt innovative approaches to subject content, committing large blocks of time to a specific theme or

TABLE IV.3

APPROACHES TO SUBJECT CONTENT USED FREQUENTLY BY PROJECTS WITH VARIOUS INSTRUCTIONAL EMPHASES: SUMMER COMPONENT

	Instructional Emphasis			
	Enrichment or Enrichment/Support	Remediation or Remediation/Support	Support Only	Several or No Emphases
Instructors develop their own class syllabus		+		
Instructors commit large blocks of time to a specific theme or subject	+			+
Instructors use cross-disciplinary themes to link classes in different subjects	+			+

NOTE: Plus signs indicate a greater tendency to use an approach to subject content. Differences are significant at the 0.05 level.

subject or using cross-disciplinary themes to link classes in different subjects; only those projects that report several emphases (many of which stress enrichment) are as likely to use these techniques. Similar but less pronounced patterns emerge during the academic year component.

C. WRITTEN EVALUATIONS AND COURSE CREDIT

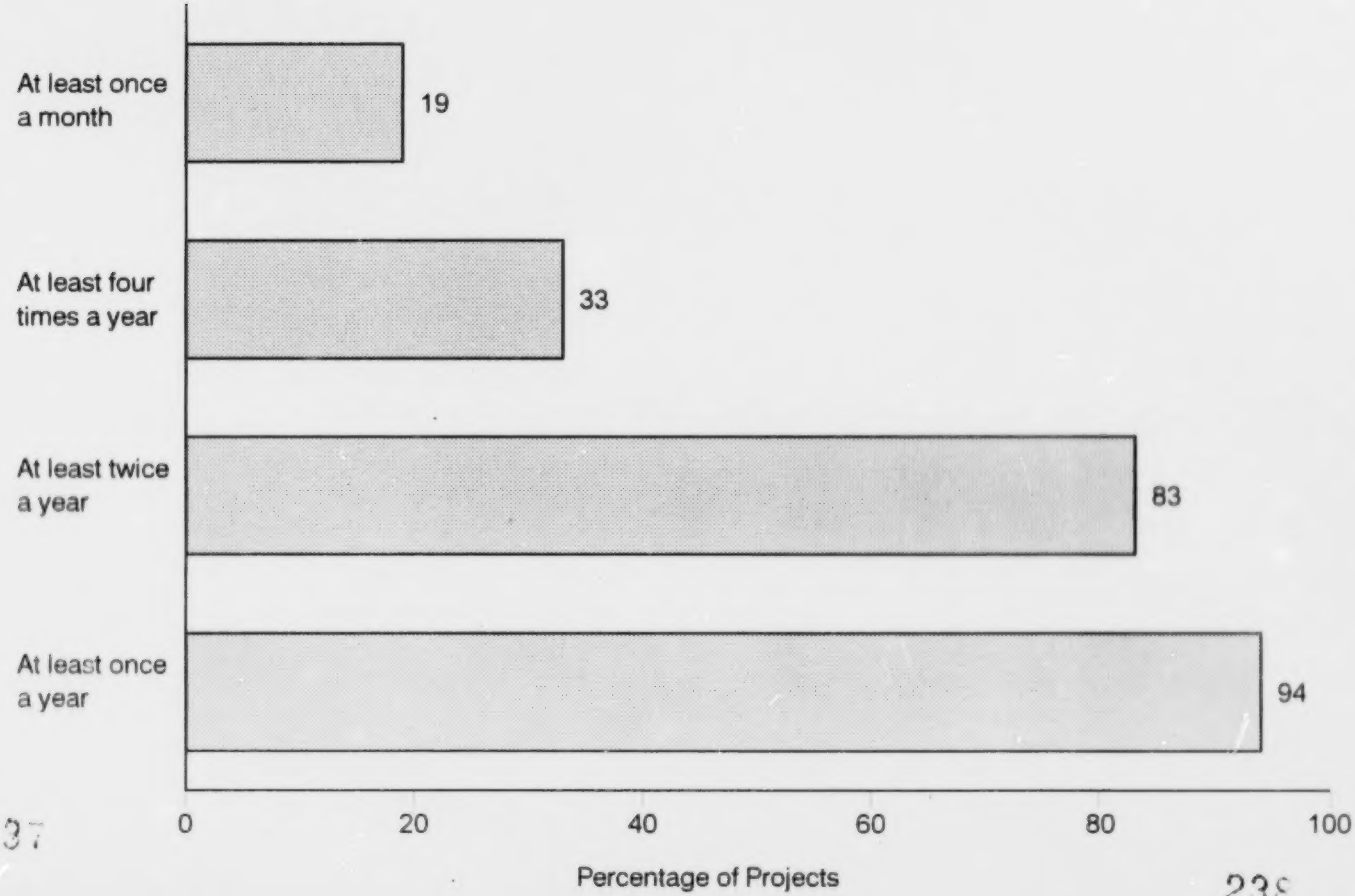
- Participants are typically evaluated in writing two to three times a year.
- Students are much more likely to earn college credit than high school credit for their work in Upward Bound. Two-thirds of project directors report that all summer bridge participants earn college credit, but only about one-fifth report that all participants earn high school credit.

Nine-tenths of projects evaluate students in writing at least once a year; one-fifth evaluate students as often as once a month (Figure IV.4). One-half of all projects produce written reports of participants' progress two or three times a year, probably at the end of the summer component and again at the end of the academic year. There are relatively few differences by project location, host institution, size, age, or predominant student ethnicity in the frequency with which participants are evaluated. However, rural projects are substantially more likely than others to assess students frequently. Over a third (35 percent) do so at least monthly, compared with about a tenth (11 percent) of urban projects. The reason for this difference, which persists even when we control for other project characteristics, is unclear.

Students may also receive feedback on their work in the form of course credits from either their high school or the college or university that sponsors their Upward Bound project. The opportunity to earn credit for Upward Bound course work may be an important incentive for students to enroll in the program, and in the case of high school credit, may also make it easier for students to participate, by reducing the number of credits students must earn outside the program. In the mid-1970s, about one-half the projects visited by the RTI research team reported that all of their target schools permitted Upward Bound

FIGURE IV.4

FREQUENCY OF WRITTEN EVALUATIONS



participants to earn high school course credit for some Upward Bound course work, and others reported that some of their target schools did. Today, relatively few project directors (27 percent) report that a majority of participants earn high school credit for Upward Bound course work, and half (54 percent) report that ***none*** do (Figure IV.5).[2] The proportion of students who earn high school credit varies with several program characteristics. Students at predominantly African American projects, for example, are considerably less likely than others to receive high school credit for Upward Bound course work. Only 31 percent of the directors of predominantly African American projects, compared with 50 to 81 percent of other project directors, report that ***any*** of their students receive high school credit for Upward Bound course work. These differences persist when we control for such basic project characteristics as location and size, but may be attributable to other variations among projects that were not accounted for in our multivariate analyses.

Conversations with project directors have suggested a few possible reasons for the infrequent award of high school credit. First, high schools may not grant credit for work done outside an accredited high school or summer school program. (One project director pointed out that some states prohibit high schools from granting credit for course work done in other programs.) Project directors may also choose not to make courses credit-bearing, in the hope of encouraging students to attempt more challenging courses than they might if they were faced with the pressure of having to achieve a passing grade.

Students are considerably more likely to earn ***college*** credit for their work in Upward Bound. Almost two-thirds (62 percent) of all project directors indicate that all summer bridge students earn college credit for some Upward Bound course work and another one-fifth (22 percent) report that at least some do. There are few differences across project types in the proportions of students who receive college credit for their Upward Bound work. But directors of racially/ethnically diverse or predominantly white projects are

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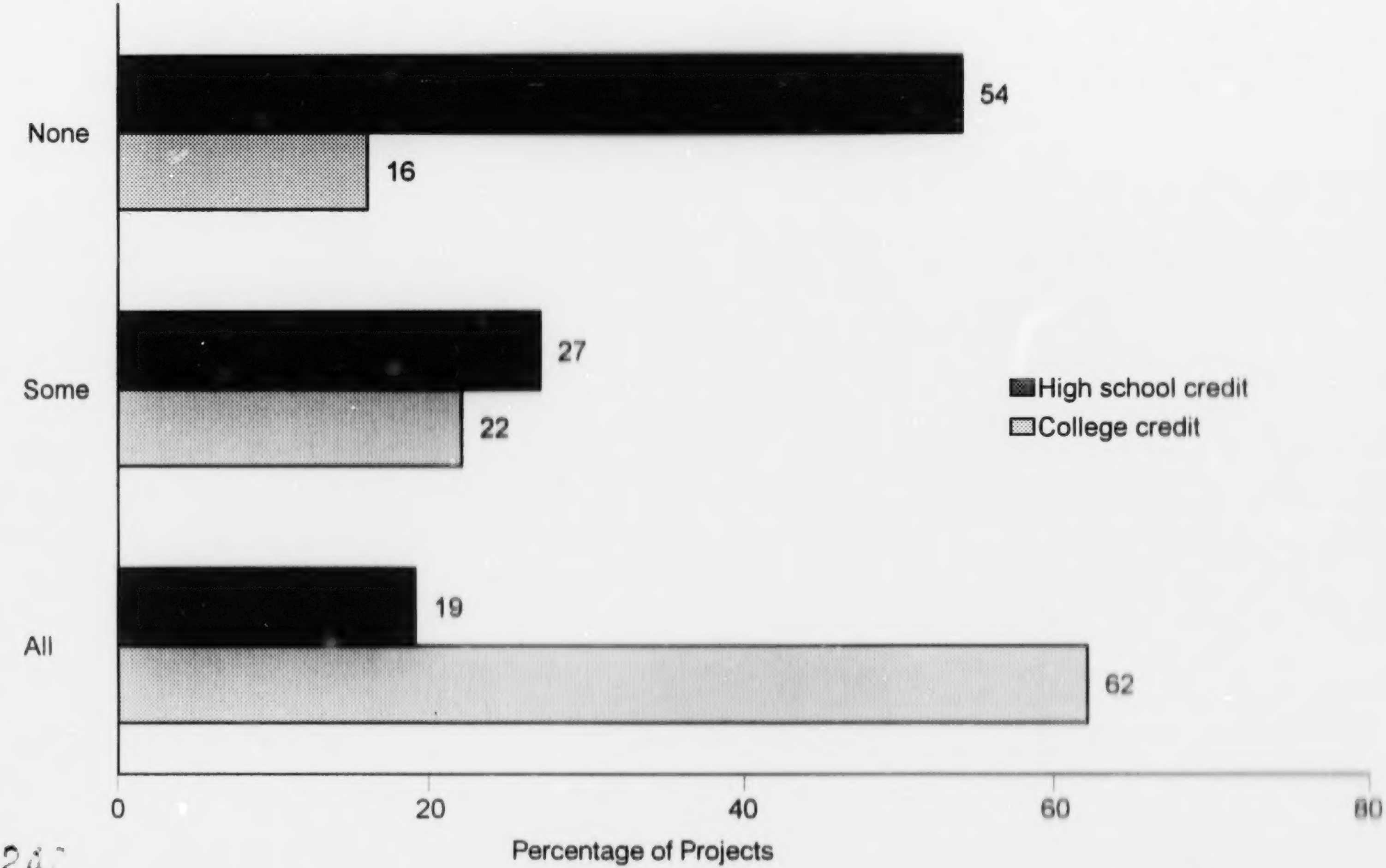
[2] The survey did not collect data about the subject areas in which students earn high school or college credit; this information will be gathered in the effectiveness study.

FIGURE IV.5

HIGH SCHOOL OR COLLEGE CREDIT EARNED FOR UPWARD BOUND COURSES

(Projects reporting all, some, or no participants earn credits)



more likely than directors of predominantly African American projects to report that all summer bridge students earn college credit for their work (92 percent versus 54 percent), and directors of predominantly white and Latino projects are more likely than directors of African American projects to report that ***any*** summer bridge students receive college credit (97 percent versus 78 percent). As with variations in the proportion of students who earn high school credit, the reasons for these differences are unclear but cannot be attributed to variations in other basic project characteristics.

The relationship between projects' instructional emphases and the likelihood of students' earning high school or college credit is unclear. Projects that emphasize instruction that parallels high school course work during the academic year, for example, are actually less likely than others to report that participants receive high school credit for Upward Bound work. Similarly, students in projects that emphasize enrichment during the summer are less likely than students in other projects to earn college credit for their work in the program.

D. INTEGRATION WITH FAMILY AND SCHOOL

- The vast majority of projects meet with parents at least once a year to review students' performance and discuss plans for improvement. Almost three-quarters make home visits at least that often. But only about one-fifth of all projects provide many varied opportunities for parental involvement.
- Nine in ten projects employ target school teachers as instructors, and four-fifths seek teachers' input in developing plans to improve students' performance. The overall level of target school staff involvement in the program, however, is difficult to gauge from the survey data.

Parents' and teachers' support is likely to be a key factor in students' commitment to Upward Bound. While the level of parental and target school staff involvement is not entirely within projects' control, administrators and staff may encourage interest and participation in a variety of ways. In general, the survey data indicate that nearly all projects involve parents and target school staff in some manner, but the frequency and intensity of these interactions is difficult to assess.

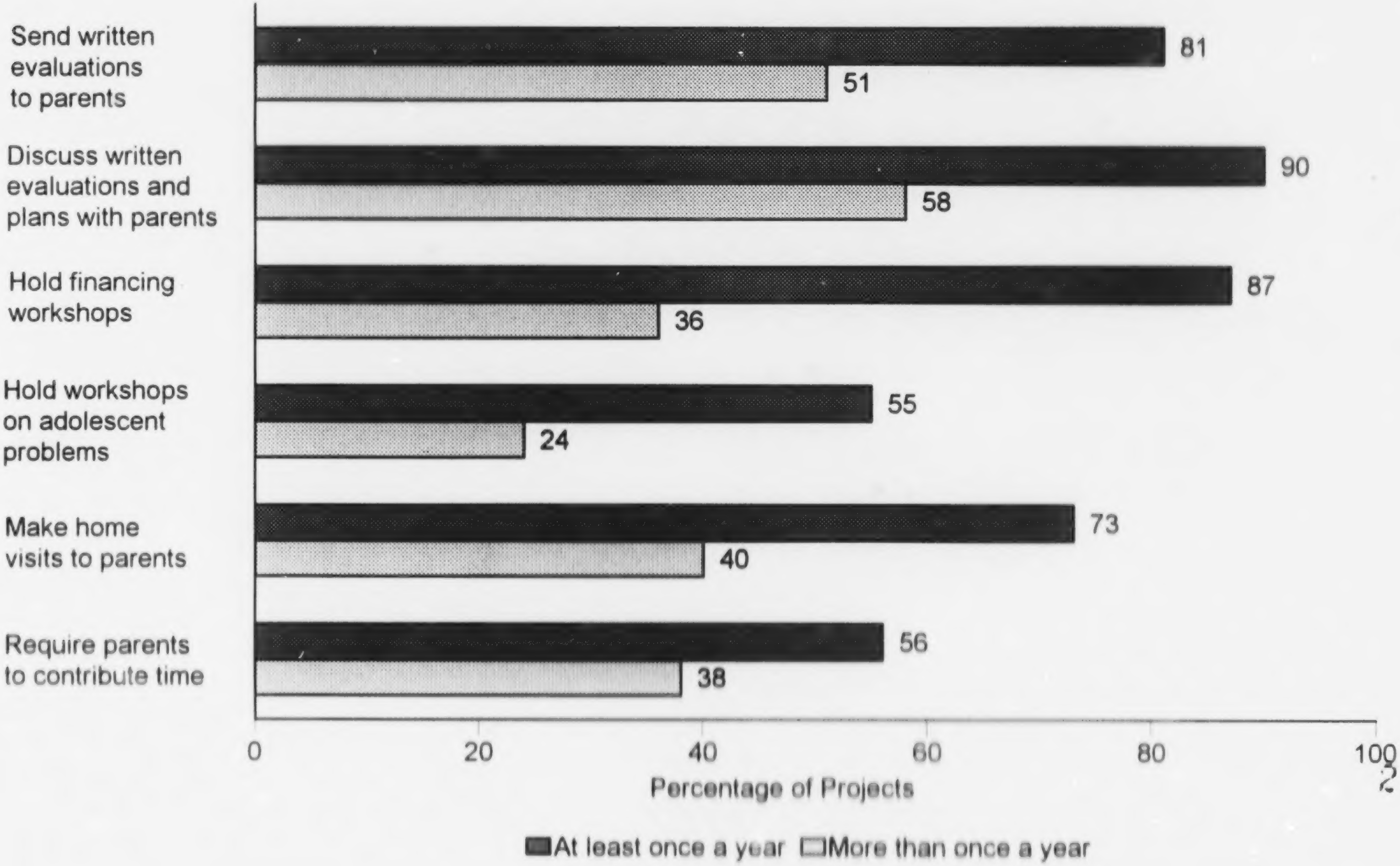
1. Parental Involvement

All projects have at least some contact with participants' parents during the year. As shown in Figure IV.6, 90 percent meet with parents at least once a year to review participants' performance and discuss plans for improvement. Almost three-fifths schedule parent-teacher conferences more than once a year. (Seventy-four percent of projects that evaluate students in writing more than once a year share evaluations with parents that frequently, either in writing or in parent-teacher conferences.) Home visits are surprisingly common: Almost three-quarters of project directors report that staff visit participants' homes at least once a year to meet with parents, and two-fifths report that visits are made more than once a year. Most projects also hold annual workshops for parents, usually to help them plan for financing their children's college education. Projects are about evenly divided in terms of whether they require parents to contribute time to Upward Bound activities. Those that do so generally expect parents to help out two to three times a year. At many projects, staff meet or communicate in writing with parents several times a year. One-half of all respondents (50 percent) report conducting several different activities with parents at least twice a year, and one-quarter (26 percent) report meeting with parents for some purpose at least every few months, often in their own homes.

Parents' overall level of involvement in the program is difficult to assess, however, in part because project directors were not asked to specify the total number of meetings and communications between project staff and parents during the year. So it is not clear, for example, whether projects that report involving parents in three different activities once a year dispense with all three in a single annual meeting or confer with parents on three separate occasions. Evidence from the case studies suggests that the level of parental involvement varies considerably from project to project, and only a minority of projects have substantial interaction with parents. Five of the twenty sites visited were characterized by the case study team as strongly family-oriented, because they provided a combination of such activities as home visits,

FIGURE IV.6

PARENTAL INVOLVEMENT



regular parent-teacher conferences, or opportunities for parents to participate in Upward Bound activities or to work in the program as volunteers or paid staff. The survey results are consistent with these findings. Only 26 percent of projects report conducting any activity with parents more than six times a year. Most of these projects (about 19 percent of all projects) involve parents in five or more activities at least once a year and in three or more activities at least twice a year. Opportunities for parental involvement are typically fewer and less varied at the majority of projects.

Although the frequency with which projects interact with parents obviously varies, there is no consistent pattern to these differences. Large projects, for example, do not appear to be markedly more or less likely than small to involve participants' parents in activities. Nor does there appear to be any relationship between project location and the degree to which staff encourage parental involvement.

2. Involvement of Target School Staff

Target school staff are a potentially important resource for Upward Bound projects. In addition to helping develop Upward Bound courses or individual plans of study for students, target school staff may actually work in the program as instructors or tutors. The survey results indicate that the vast majority of projects employ some school staff as instructors and work with school staff to develop individualized plans of study for participants; many projects also involve school staff in evaluating students and developing courses, usually on an annual basis. But like parental involvement, the overall level of target school staff involvement is difficult to assess, because neither the total number of contacts between project and target school staff nor the proportion of target school staff that participates in various activities is known. Moreover, because projects draw students from an average of 10 schools, the level of interaction between project and school staff may vary considerably across schools associated with a given project. Projects that

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report hiring target staff as instructors, for example, probably recruit from only a subset of their affiliated schools.[3]

The case studies suggest that high school administrators and teachers who are not formally affiliated with Upward Bound tend to have little familiarity or involvement with the program. Most projects visited by the case study team had secured some level of cooperation from their target schools in recruiting students, scheduling Upward Bound services at the schools, and coordinating high school and program offerings. But relatively few projects reported regular personal interaction between project staff and target school staff, other than designated Upward Bound liaisons and teachers who were employed in the program as tutors or instructors. The flow of information about students' performance also tended to be one-way, with the schools furnishing reports to the projects, but receiving little feedback in return.

In many cases, high school staff employed as Upward Bound instructors provide a key link between the program and the schools. Nine in ten projects employ some target school staff as instructors (Figure IV.7). Just over one-half the directors surveyed say they do so more than once a year, which may mean either that school staff are employed to teach full-length courses in both the summer and the academic year or that staff are hired on multiple occasions as visiting lecturers or workshop leaders. Projects are about evenly divided in terms of whether they recruit target school staff as tutors.

Target school staff may also participate in the program in less formal capacities, but the proportion of staff involved in these activities cannot be determined from the survey data. Four-fifths of Upward Bound project directors report that they enlist some school staff to help develop plans to improve students' performance; about one-half say project and school staff meet two to three times a year for this purpose, probably during each of the two sessions. Most projects also involve school staff in developing Upward Bound courses and services, but only about one-quarter meet with school staff more than once a year to

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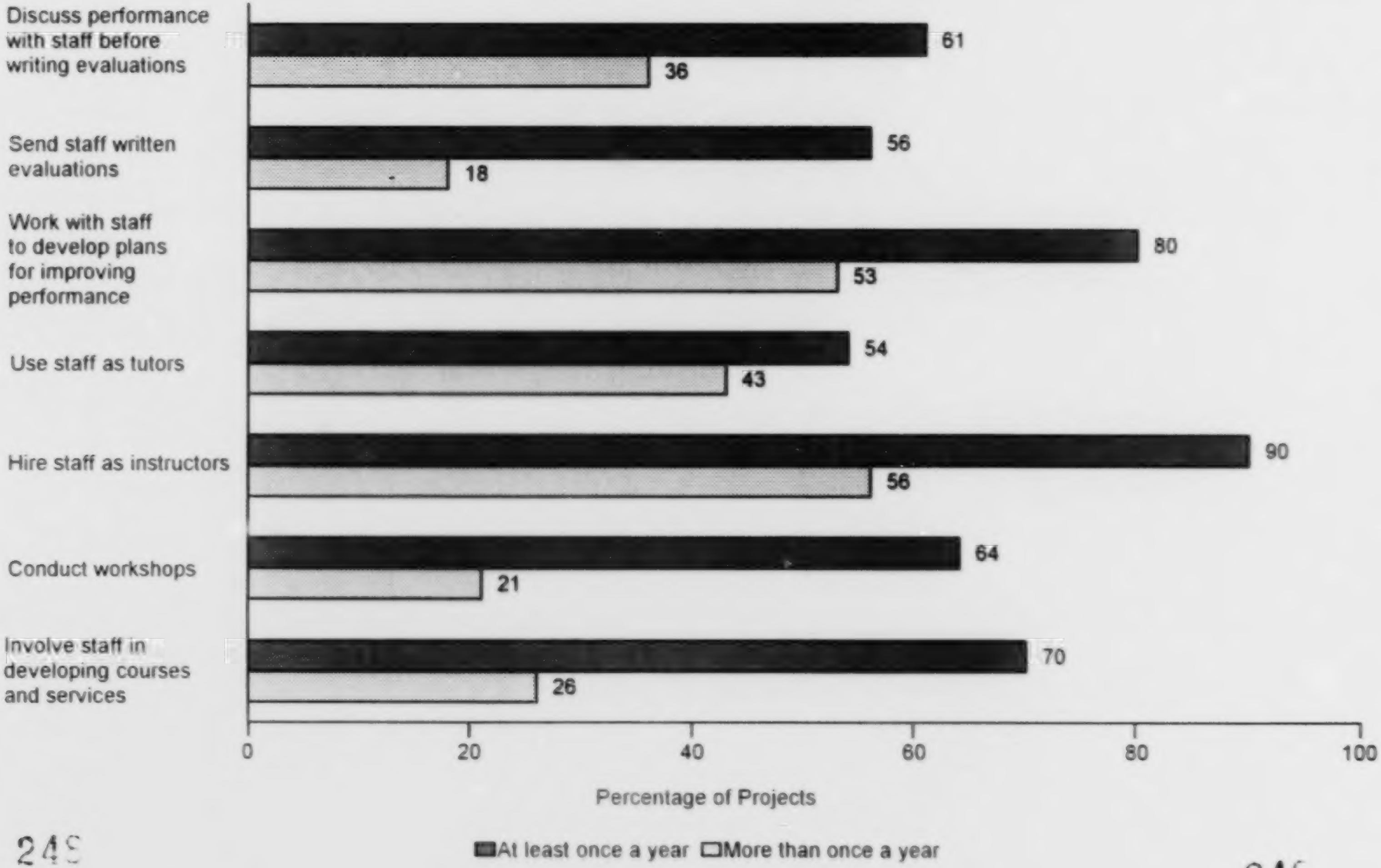
[3] This may explain why the perspectives of Upward Bound project directors differ dramatically in some respects from those of the target school principals and Upward Bound liaisons who participated in the target school survey (Waldman, Meyers, and Jacobson 1995).

FIGURE IV.7

INVOLVEMENT OF TARGET SCHOOL STAFF



do so. A majority of projects solicit the input of target school teachers before preparing assessments of students' progress, but fewer than two-fifths do so more than once a year. Consistent with the case study findings, which suggest a one-way flow of information from schools to Upward Bound projects, only about one-fifth of projects share their assessments of students with the schools more than once a year. (Projects are more likely to send evaluations to parents than to the schools.)

The case studies also found that the length of a project's affiliation with a target school had little impact on the quality of the relationship between the two. The survey data yield similar results. Controlling for project age, the proportion of target schools associated with a project for more than five years is positively associated with only one measure of target school staff involvement--the likelihood of projects' sending evaluations to the schools more than once a year. Projects with a higher proportion of ***short-term*** relationships with their target schools are actually more likely than others to conduct workshops for school staff more than once a year, perhaps because project administrators perceive a greater need to inform staff at newly affiliated schools about the program. The frequency with which projects conduct various activities with their target school staff is also largely unrelated to the number of schools involved. One exception is workshops for target school staff. The more schools a project works with, the more likely it is to conduct workshops for school staff more than once a year. Although the reasons for this correlation are not clear, projects that work with a large number of schools may consider group meetings involving staff from multiple schools the most efficient way to communicate with participants' teachers.

The involvement of target school staff does vary with several basic project characteristics. Location is a key factor. Although rural projects typically work with a larger number of schools than do their urban counterparts, the former are substantially more likely than the latter to solicit target school teachers' input in preparing evaluations of individual students and developing plans to improve their performance. The level of school staff involvement is also correlated with project size. Small projects are more likely than medium-size to send written evaluations of students to the target schools and to seek staff assistance in developing courses and services; medium-size and large projects do not significantly differ in this regard. The primary difference between projects based at two-year schools and those based at four-year schools is in the employment of target school staff in the program. Projects based at two-year schools are more likely than others to recruit target school staff as tutors and to employ school staff as instructors more than once a year. Projects with a predominantly Native American student body also seem to form different relationships with their target schools than do other projects. Compared with African American projects, which constitute the majority of Upward Bound projects, those with mainly Native American students are more likely to meet with school staff to discuss students' performance before preparing evaluations and to send evaluations to the target schools. They are also more likely to use staff as tutors, but less likely to employ them as instructors.

Involvement of target school staff also varies with projects' instructional emphases. The projects that appear to differ most from others are those that place a major emphasis on remediation in either the summer or the academic year. These projects are somewhat less likely than others to involve target school staff in activities that address the needs of Upward Bound students as a ***group.*** None of the projects that emphasize remediation during the summer, for example, involve school staff in developing Upward Bound courses more than once a year or conduct workshops for school staff, while one-fifth or more of other projects do so. But projects with a remedial focus are more likely to communicate with school staff about ***individual*** students' performance. Sixty-three percent of those that emphasize remediation during the summer evaluate participants' work in consultation with target school staff more than once a year, compared with 27 percent of those that emphasize enrichment and 17 percent of those that emphasize only support. Only those projects with several emphases (many of which stress remediation) are as likely to meet with school staff as often to discuss participants' performance. Similarly, projects that report a remedial focus during the academic year are more likely than others to send evaluations to the schools more than once a year, and more likely than those that focus on support to meet with staff more than once a year to develop plans to improve individual students' performance. These results suggest that while projects that emphasize remediation consult with high school teachers to develop individualized programs for students, projects that emphasize support or enrichment more often draw upon teachers' experience to improve the curriculum for the group as a whole.

V. STAFFING

The Upward Bound program employs more than 5,200 teachers, counselors, administrators, and other staff members during the summer and more than 3,200 during the academic year.[1] Over one-half (56 percent) of summer staff work full-time, while almost two-thirds (64 percent) of academic year staff work part-time. Although the survey data cannot fully inform our understanding of students' relationships with staff, the information obtained from project directors permits us to sketch a basic portrait of Upward Bound staff in terms of their ethnic backgrounds, education, and program experience. The data also provide an overview of projects' staffing patterns--the numbers and types of staff employed, variations across the academic year and summer components, ratios of students to staff, and the amount of contact students have with staff. In this chapter, we look first at staff characteristics and then at staffing patterns.

A. STAFF CHARACTERISTICS

- Nine in ten Upward Bound staff members hold at least a bachelor's degree; more than one-half have advanced degrees.
- Staff turnover appears to be fairly high, particularly in the summer component. At over one-half of all projects, the majority of full-time summer staff have fewer than four years' tenure.
- Fewer than one-half of all project directors have a faculty or administrative appointment at the host institution. This suggests that many project directors are not in a position to easily command institutional resources for the project.
- Women have more than quadrupled their representation among project directors since the mid-1970s and now lead more than one-half of all projects.
- The ethnic or racial composition of staff tends to mirror that of project participants. For example, 74 percent of the staff in projects that serve primarily African American students are African American, and 90 percent of the staff in projects that serve primarily white students are white.

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[1] Not included in these numbers are mentors and tutors, who may or may not be paid, or clerical workers.

In this section, we examine the educational attainment of summer and academic year staff; staff tenure and turnover; directors' affiliations with the host institution; and the gender and racial/ethnic mix of staff. Because the survey did not collect detailed information about the characteristics of mentors and tutors, the following discussion focuses on "regular" staff: teacher/counselors, teacher/instructors, counselors, and administrators.

1. Educational Attainment

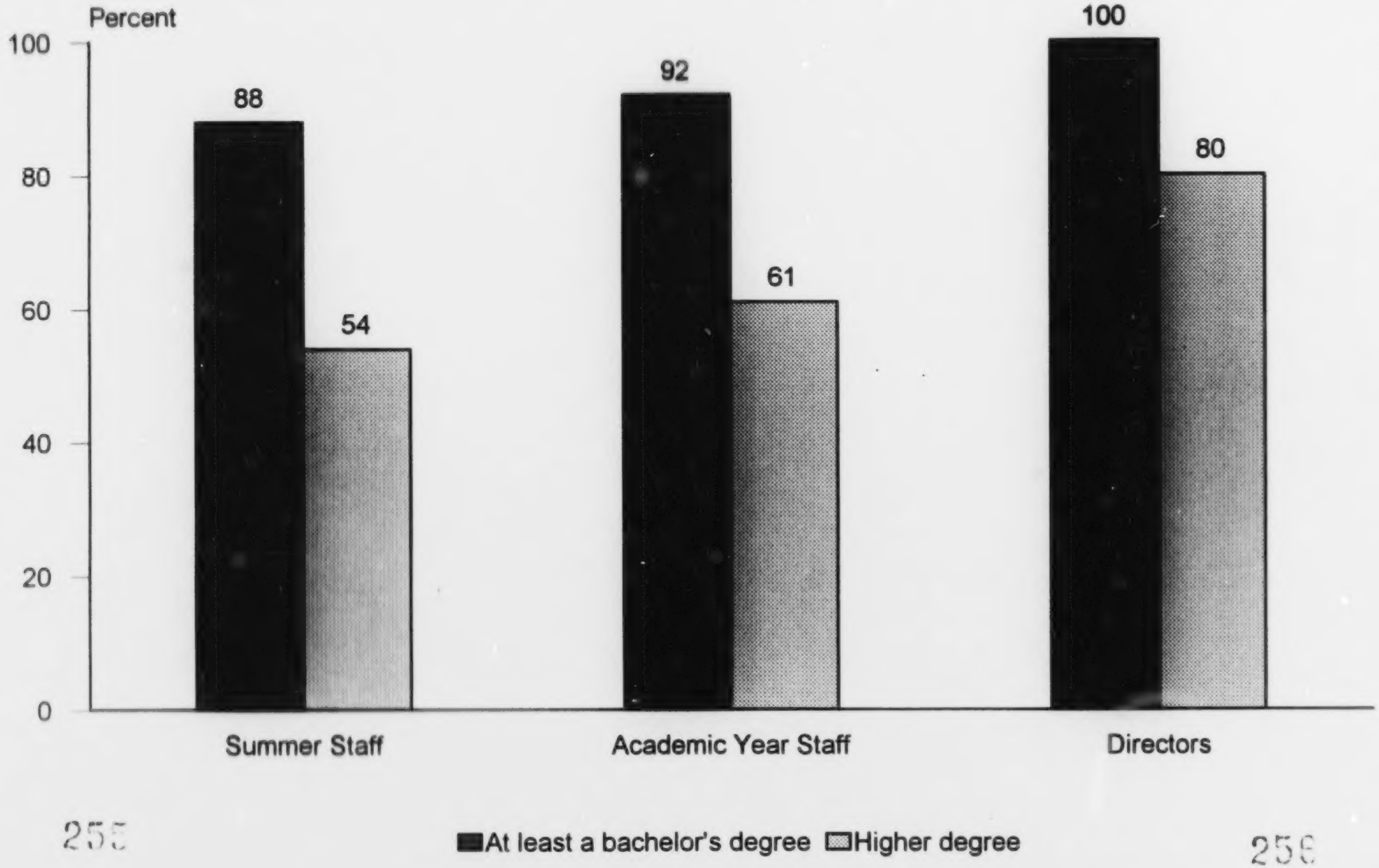
Close to 90 percent of Upward Bound summer staff and over 90 percent of academic year staff hold at least bachelors' degrees. More than one-half the staff in both components hold higher degrees (Figure V.1). Among project directors, the proportion with advanced degrees is even higher (80 percent); one in ten directors has a doctoral degree. Part-time staff are generally as well-educated as full-time, although part-time academic year staff are somewhat less likely than full-time to have advanced degrees (58 percent versus 67 percent).

Some differences in the educational attainments of staff emerge across projects that serve different ethnic or racial groups. Projects with a predominantly Latino student body, for example, tend to have less highly educated staff than do projects that serve primarily African American students. In Latino projects, the average proportion of full-time staff that hold higher degrees is 49 percent in the academic year component and 40 percent in the summer component, compared with 71 percent and 66 percent in African American projects. Differences between the two project types persist even when we control for project location, size, age, and host type. These disparities may reflect special circumstances faced by Latino projects (such as a need for bilingual staff) that cannot be observed in our data.

Projects tend to recruit undergraduates, presumably from the host institution, as mentors and tutors. Four-fifths (82 percent) of projects use undergraduates in this role, two-fifths (41 percent) recruit professionals, and one-fifth (21 percent) recruit graduate students. Eight percent recruit retired teachers.

FIGURE V.1

EDUCATIONAL ATTAINMENT OF STAFF



2. Tenure and Turnover

Projects tend to have a sizeable proportion of new or relatively new staff.[2] (We define new staff members as those who have one or fewer summers or years of experience and relatively new staff as those who have two to three summers or years of experience.) Averaging across projects, three-fifths (62 percent) of summer staff have worked for their project for fewer than four summers; 55 percent of academic year staff have served for fewer than four years. Between one-quarter and one-third of the staff in both components have held their jobs for no more than one summer or year. At many projects, a large proportion of the staff is new or relatively new to the job (Figure V.2). Staffing appears to be somewhat more stable during the academic year than during the summer. Only about one-third of respondents report that the majority of full-time academic year staff is new or relatively new, compared with over one-half that report having a majority of new or relatively new full-time summer staff.

Project expansion may account for some of the hiring of new staff. But staff turnover seems a more likely explanation, particularly given the program's historical emphasis on regular recruitment of new staff. (Atl the time of the RTI evaluation, program guidelines encouraged projects to replace one-third of their instructional staff each year in the interest of bringing fresh ideas and energy to the program.)

Turnover appears to be somewhat higher than average in projects that serve certain ethnic or racial groups (Figure V.3). Compared with African American projects, those with a predominantly white, Latino, or Native American student body have, on average, a somewhat higher proportion of new full-time summer staff; Latino projects also have a higher proportion of new academic year staff (both part-time and full-time). Differences among these project types persist when we control for basic project characteristics, including years in operation. Other differences in staff turnover at projects that serve different racial or

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[2] The survey collected information only about staff members' employment in their current project, not in Upward Bound generally nor in other programs serving disadvantaged students.

FIGURE V.2

STAFF TENURE: PERCENTAGE OF PROJECTS WITH HIGH PROPORTIONS OF NEW/RELATIVELY NEW STAFF

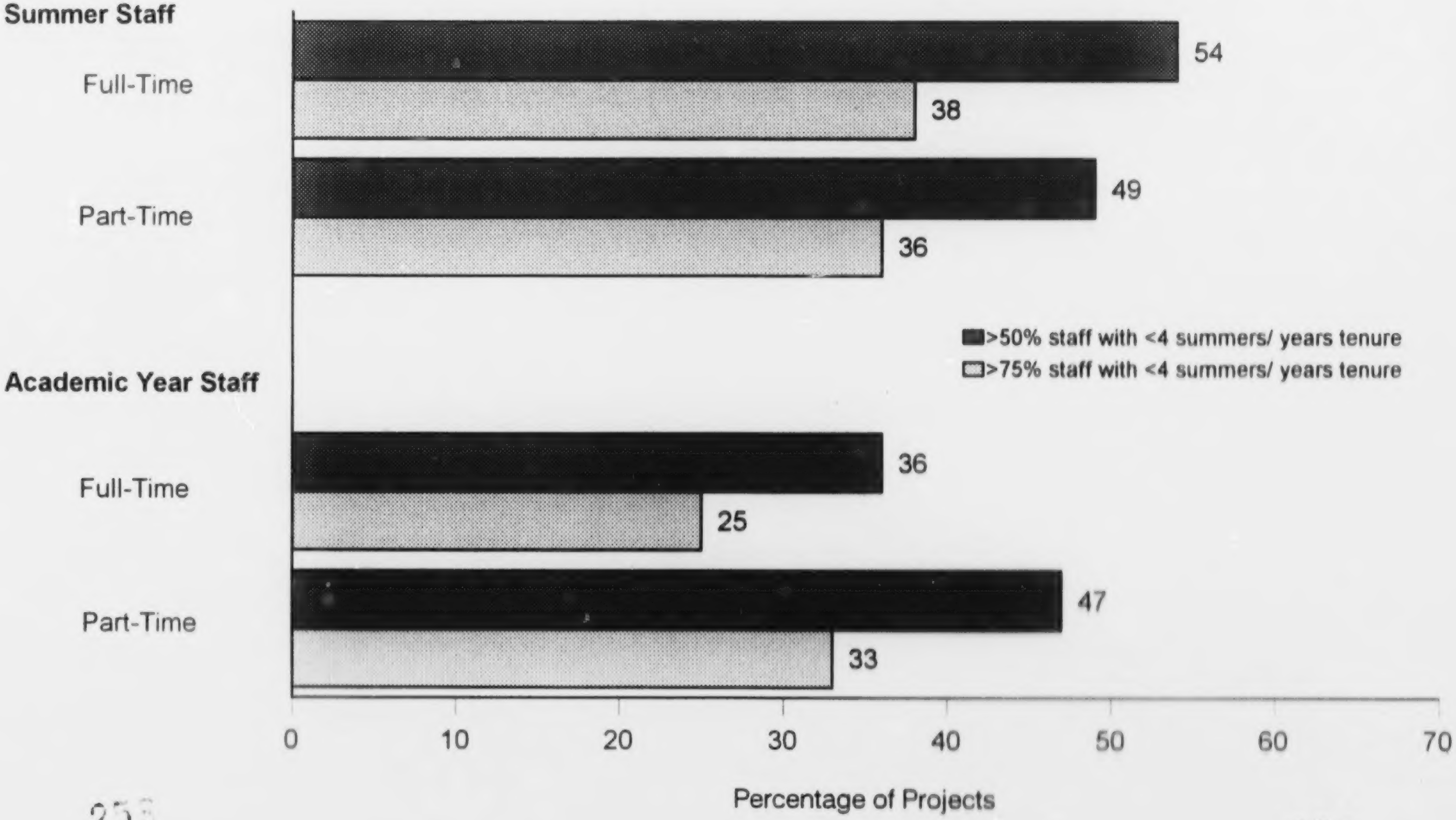
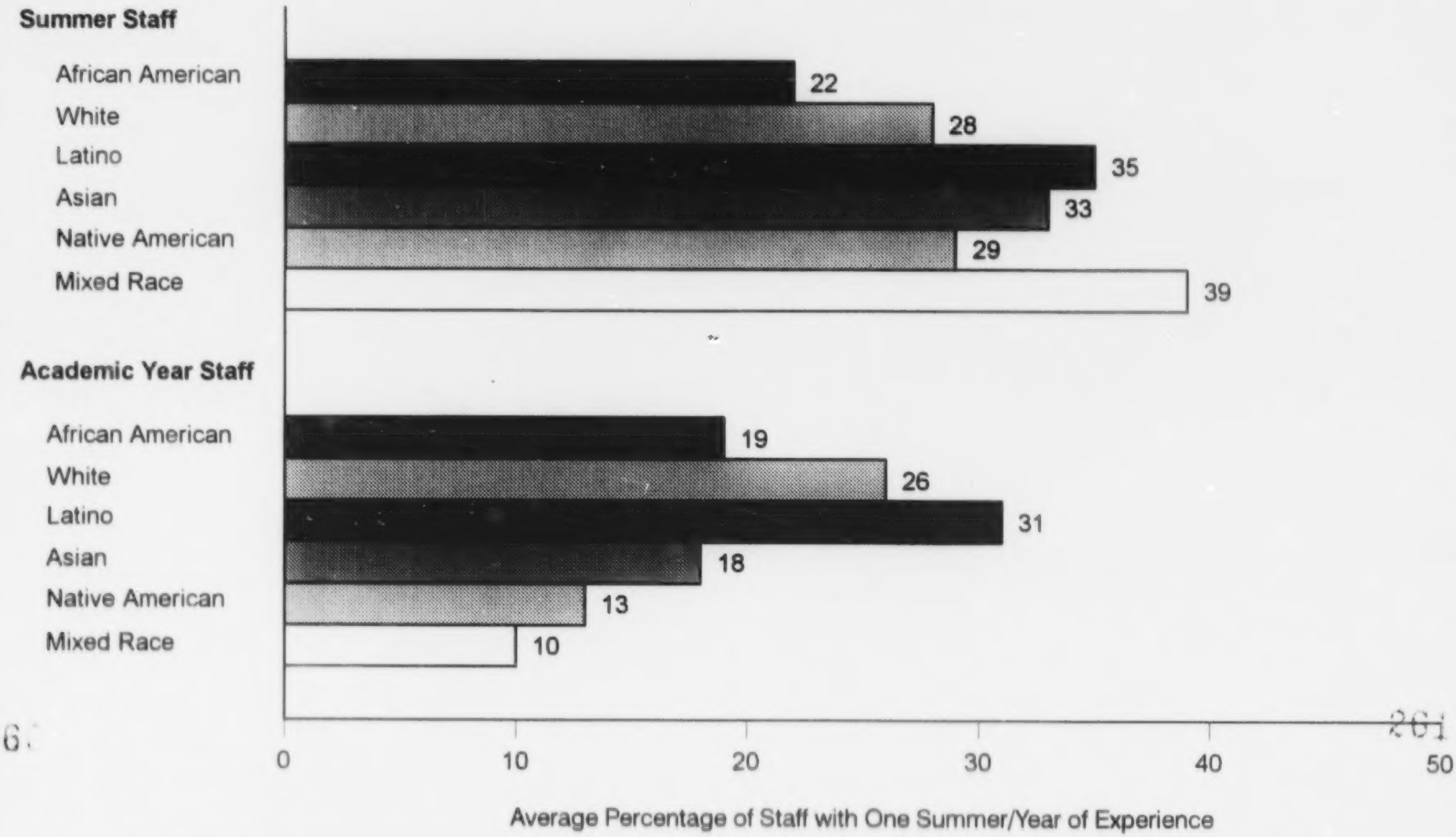


FIGURE V.3

PERCENTAGE OF NEW FULL-TIME STAFF BY PREDOMINANT RACE/ETHNICITY OF STUDENTS



ethnic groups disappear when the percentage of new staff is conditioned on project location, host type, size, and years in operation.

Directors' tenure tends to be longer than that of most other staff members but there is considerable variation about the mean (Figure V.4). A sizeable fraction (37 percent) of directors have five or fewer years of experience with Upward Bound in any capacity, while an almost equal number (43 percent) have been employed by the program for more than 10 years. One-half (52 percent) have directed their current project for five or fewer years, while one-third (34 percent) have held their jobs for more than 10 years. Only a small fraction (8 percent) of directors report having participated in Upward Bound as a student.

Despite high rates of turnover at many projects, staff recruiting appears to pose little difficulty. Only one-fifth (19 percent) of survey respondents report having trouble recruiting academic year instructors; even fewer report difficulty filling other positions.

3. Directors' Affiliations

Directors' ability to command institutional resources for their project is often thought to depend in part on their status within the institutional hierarchy of the college or university that hosts the project. Directors who have strong professional relationships with college or university administrators may be in a better position than their counterparts who lack these ties to enlist school faculty as instructors and to negotiate for the use of such school facilities as computer and science labs. For this reason, project directors were asked about their affiliations with the host institution, including faculty status, administrative appointments, and service on advisory committees. Their responses suggest that directors seldom occupy influential positions within the institutional structure.

Only 4 in 10 (41 percent) directors hold either a faculty or administrative appointment. One-quarter (25 percent) report being on the faculty at the host institution, but few (21 percent) of those who have faculty status are tenured. Among directors with faculty appointments, one-third (34 percent) are instructors, one-third (35 percent) are assistant or associate professors, and about one-quarter (27 percent)

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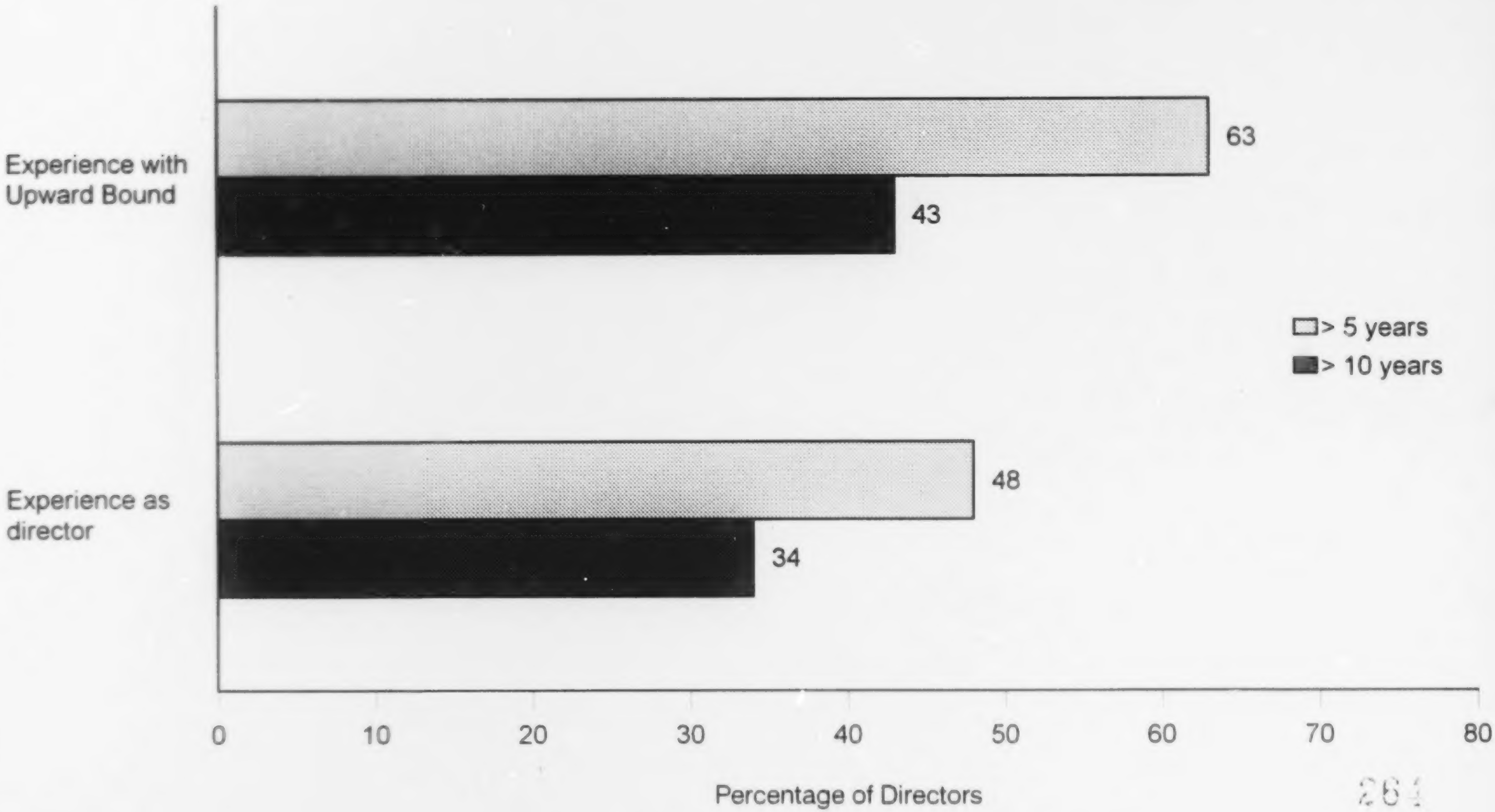
FIGURE V.4

DIRECTORS' EXPERIENCE



have some other rank. Only 5 percent are full professors. None of the directors of projects based at two-year schools are professors (assistant, associate, or full), perhaps because these positions do not exist at many community colleges. Three-fifths (62 percent) of Upward Bound directors who are on the faculty of two-year schools report that their rank is instructor.

One-quarter (27 percent) of directors report that they have an administrative appointment at the host institution. Of these, about 12 percent are department heads, and 86 percent have some other administrative title. Service on advisory or planning committees at the host institution is much more common than either faculty or administrative appointments. Three-quarters of all directors (73 percent) serve on at least one such committee; one-half (49 percent) serve on two or more.

4. Personal Characteristics

Interest in the personal characteristics of staff ordinarily centers on the issue of mentoring: It is generally believed that staff whose backgrounds and experiences are similar to those of program participants can more easily engage students and provide positive role models. Although directors were not asked about staff members' backgrounds or socioeconomic status, the survey did include questions about the sex and race/ethnicity of staff members. The data suggest a growing tendency for the mix of staff in a project to resemble the mix of students on these two key dimensions.

When RTI conducted its evaluation in the mid-1970s, almost nine in ten directors (88 percent) were male. Today, female directors outnumber males, heading 56 percent of projects. Asian projects are even more likely than African American projects to be led by women (83 percent versus 59 percent). Women also constitute the majority of Upward Bound staff, just as girls comprise the majority of participants. This, too, suggests an increase in the representation of women among project staff since the mid-1970s, when women held just under half of all instructional and counseling positions. During the academic year, the female-to-male ratio is typically about 60-40 (61 percent female to 39 percent male in the average project). During the summer, the proportion of males tends to be slightly higher (43 percent, on average).

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Men are better represented among Upward Bound staff as a whole than they are in the average project, comprising 42 percent of academic year staff and 47 percent of summer staff. This suggests that some of the larger projects have a higher than average percentage of male staff.

Survey data also indicate some improvement in minority representation since the mid-1970s. At that time, African Americans constituted only about one-third of both instructors and counselors. Today, about two-fifths of all staff are of African American heritage. Over the same period, the percentage of projects headed by African Americans rose from 47 to 59. In general, the ethnic or racial composition of project staff tends to mirror that of students. Figure V.5 contrasts the composition of summer staff in the average project with that of staff in projects that serve primarily participants of a particular race or ethnicity.[3] On average, staff of any given race or ethnicity are represented in far greater numbers in projects that serve primarily students of the same race or ethnicity than they are in projects generally. For example, while only 43 percent of summer staff in the average project are African American, 74 percent of summer staff in African American projects are African American. Similarly, whites constitute 43 percent of staff in the average project, but more than twice that proportion (90 percent) of staff in white projects. A similar pattern can be observed in academic year staffing. Directors also tend to be of the same race or ethnicity as the majority of students in the project (Figure V.6). This tendency is particularly marked in projects with a predominantly African American or white student body.

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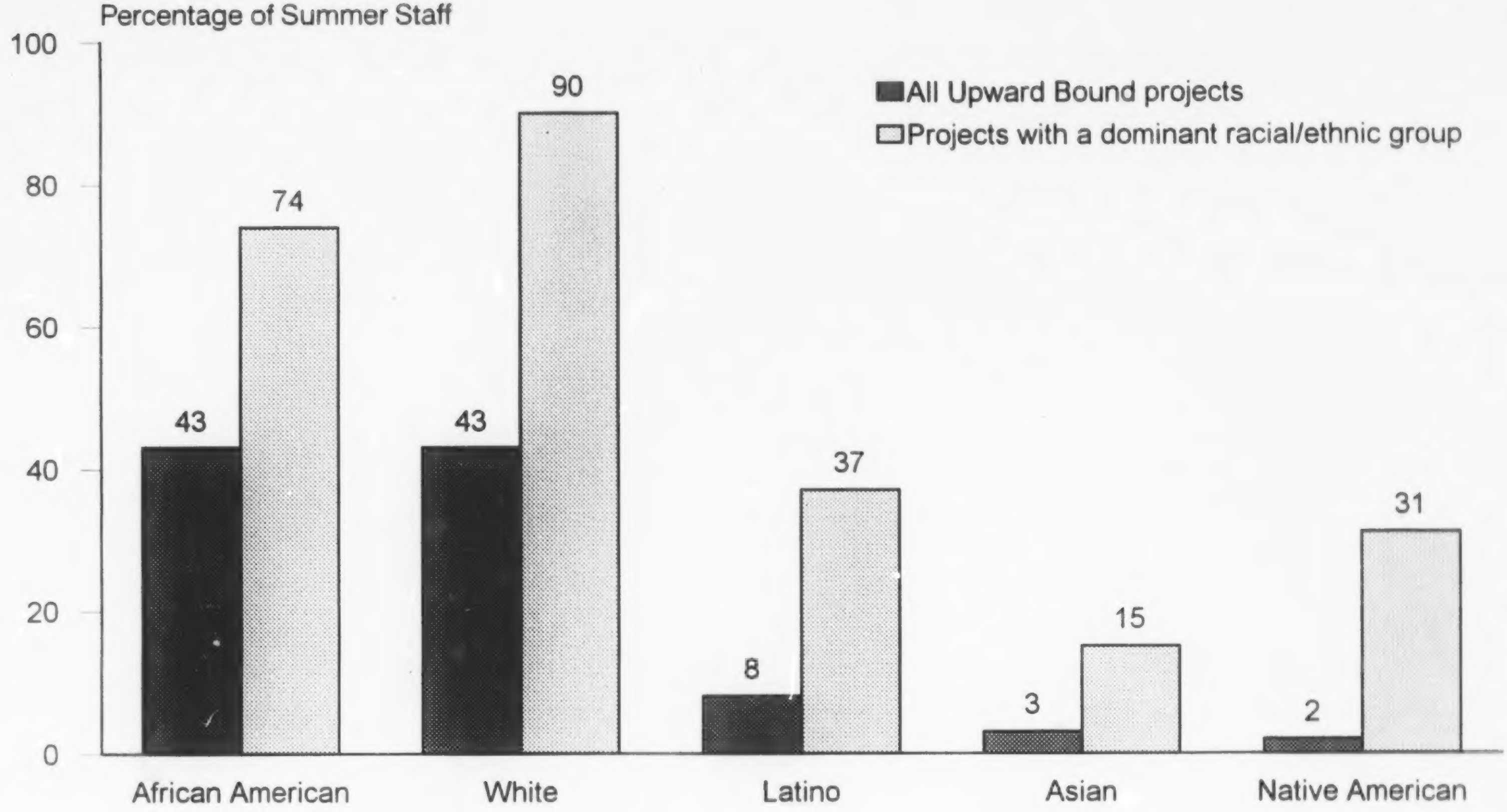
[3] Weighted averages of full-time and part-time staff were calculated based the relative proportion of each in projects that serve different ethnic or racial groups.

FIGURE V.5

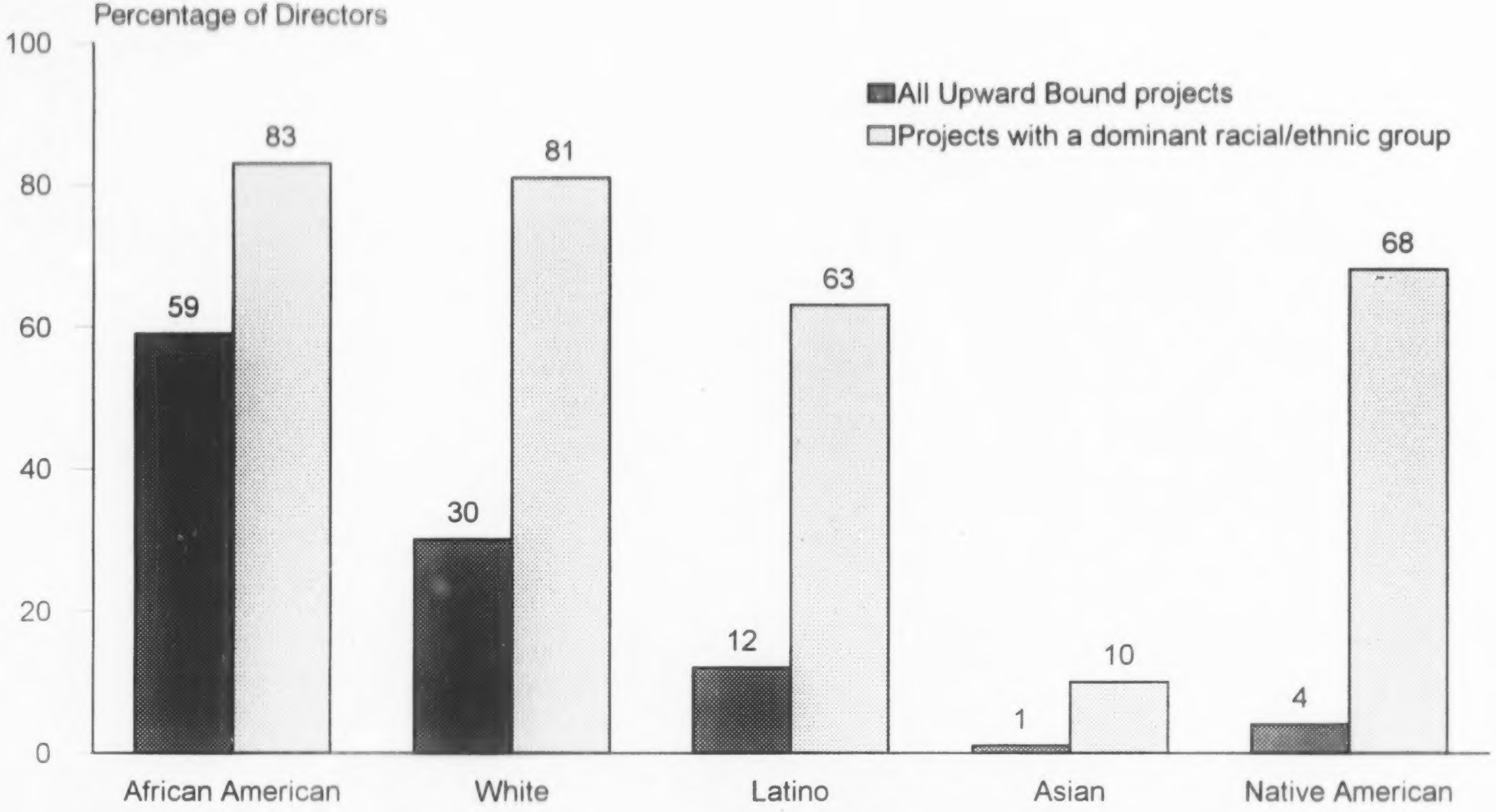
STAFF RACE/ETHNICITY



Note: The first pair of bars shows that across all projects, 43 percent of staff are African American, while in projects that serve mainly African American students, 74 percent of staff are African American.

FIGURE V.6

DIRECTORS' RACE/ETHNICITY



Note: The first pair of bars shows that across all projects, 59 percent of directors are African American, while in projects that serve primarily African American students, 83 percent of directors are African American.

B. STAFFING PATTERNS

- Projects typically rely on part-time staff during the academic year and significantly expand their full-time workforce during the summer.
- On average, the ratio of students to staff (in full-time equivalents) is 4 or 5 to 1 during the summer and 15 or 16 to 1 during the academic year; ratios are more consistent across projects during the summer than during the academic year.
- Students typically meet with instructors once a week during the academic year and with counselors and tutors somewhat more frequently.
- Not surprisingly, the frequency of contact between instructors and students during the academic year depends in part on the number of teacher/instructors and teacher/counselors projects employ relative to the number of students.
- Projects' staffing patterns are strongly correlated with their use of particular methods of instruction. Methods indicative of an academic focus are generally associated with a larger teaching staff, while methods that suggest a more affective orientation are associated with a larger counseling staff.

The numbers and types of staff projects employ are important factors in shaping students' experience in the program, influencing both the nature of classroom instruction and opportunities for social interactions between participants and staff. In this section, we provide an overview of project staffing during the two sessions and analyze the relationships among staffing patterns, student/staff ratios, the frequency of contact between students and staff, and the methods of instruction used.

1. Overview

Projects typically rely on part-time staff during the academic year and significantly expand their full-time workforce during the summer. On average, projects employ a total of 8.2 regular staff members (excluding mentors and tutors) during the academic year, about one-third of whom (35 percent) work full-time (Table V.1). The vast majority (84 percent) of projects employ no full-time teacher/counselors or teacher/instructors during this session. One-third (32 percent) employ no full-time counselors; almost one-half (46 percent) employ just one. Projects expand their staff substantially during the summer and employ

TABLE V.1

AVERAGE STAFF SIZE

	Academic Year		Summer	
Project Size	Number of Staff	Percent Staff Employed Full Time	Number of Staff	Percent Staff Employed Full Time
Small (60 or fewer students)	6.3	40	10.0	52
Medium (61-99 students)	7.4	37	11.9	51
Large (100 or more students)	11.7	29	19.2	67
All Projects	**8.2**	**35**	**13.2**	**56**

NOTE: Numbers of regular staff, excluding mentors, tutors, and clerical workers.

an average of 13.2 regular staff members. Most of the staff expansion between the academic year and summer occurs in the full-time staff. The number of part-time staff members tends to remain fairly constant, while the average number of full-time staff rises from just under 3 to just over 7 and the proportion of full-time staff increases to 56 percent.

To better assess projects' staffing patterns, we calculated the number of full-time equivalents (FTEs) employed in each of the six teaching, counseling, administrative, and other non-clerical positions listed in the questionnaire.[4] Table V.2 shows the average number of FTEs in each of these positions during the academic year and summer components.[5] In terms of FTEs, both regular staff (excluding mentors and tutors) and total staff more than double between the academic year and the summer. On average, projects employ the equivalent of twice as many teacher/counselors and more than four times as many teacher/instructors during the summer as during the academic year. The number of mentors and tutors increases threefold. (As a proportion of total staff, however, the number of mentors and tutors declines somewhat, from 40 percent in the academic year, to 33 percent in the summer.) These differences between summer and academic year staffing reflect differences in the goals and structure of the two components. As discussed in Chapter III, many projects provide tutoring, rather than formal instruction, during the academic year.

2. Student-Staff Ratios

Of greater interest than the raw number of staff is the number of staff relative to the number of project participants. In this section, we investigate the variation in student-staff ratios across projects and sessions

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[4] Numbers of part-time staff were converted to FTEs using estimates of the number of hours worked by part-time staff in various positions during the academic year and summer. These estimates were derived from data obtained from the 20 case-study sites.

[5] The survey did not explicitly inquire about resident aides. However, we assume that projects included these summer staff members among counselors (or teacher/counselors, in the case of those who also have an instructional role).

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TABLE V.2

AVERAGE STAFF SIZE IN FULL-TIME EQUIVALENTS

	Academic Year	Summer
Teacher/Counselor	0.7	1.3
Teacher/Instructor	1.0	4.6
Counselor	1.3	1.9
Administrator	1.3	1.4
Other Nonclerical	0.2	0.4
Mentor/Tutor	2.2	6.4
Total Regular Staff (excluding mentors and tutors)	**4.4**	**9.6**
Total Staff (including mentors and tutors)	**6.6**	**15.9**

and the relationship between student-staff ratios and the frequency of students' contact with instructors, counselors, and other staff members. We also examine the relationship between staffing patterns and the methods of instruction projects employ.

a. Variation Across Sessions and Projects

Reflective of the far greater intensity of the summer component, student-staff ratios are considerably lower during the summer than during the academic year.[6] On average, the ratio of students to staff FTE (including mentors and tutors) is four or five to one during the summer, and 15 or 16 to one during the academic year.

These averages, however, mask considerable variation across projects, particularly during the academic year. About one-quarter of respondents report ratios of students to academic year staff (including mentors and tutors) of less than 11 to 1, while about one-fifth report ratios in excess of 20 to 1 (Figure V.7). Holding constant project location, host type, size, and predominant student ethnicity, projects that have operated for 20 or fewer years have fewer students per staff member (including mentors and tutors) during the academic year than do the majority of projects. Student-staff ratios are also lower during the academic year at small than at medium-size projects, which suggests that certain staffing requirements do not vary directly with the number of students in the project. (Project administration, for example, is likely to require the same number of staff hours, whether the project has 50 students or 70.) There are no significant differences between large and medium-size projects, however, which suggests that economies of scale in staffing taper off as projects reach a certain size.

Student-staff ratios also vary with predominant student race/ethnicity. Native American projects appear to have more labor-intensive academic year programs than most, and maintain an average ratio of

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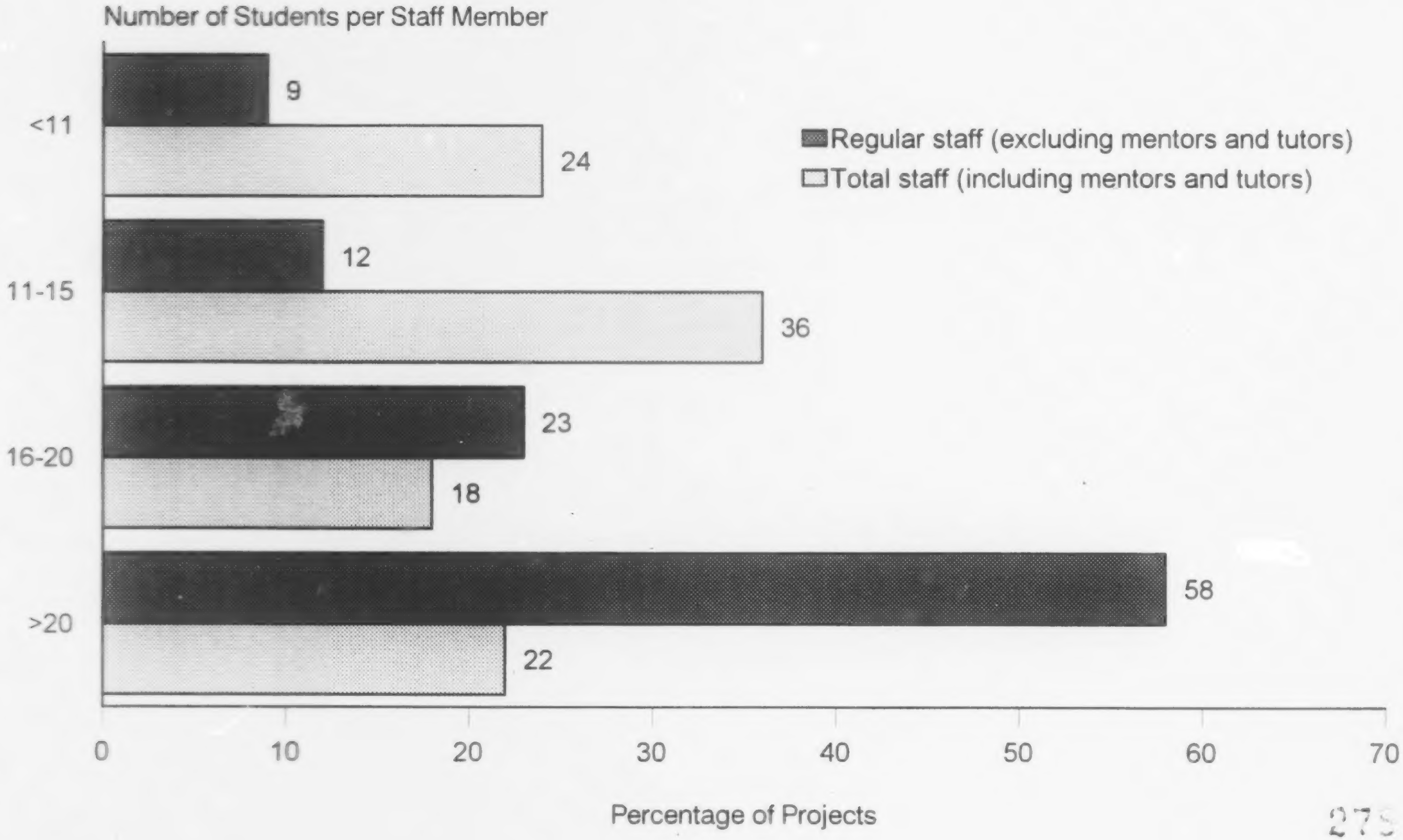
[6] Student-staff ratios were calculated using estimates of staff FTEs. Students enrolled in the summer bridge program were omitted from the calculations of these ratios. (Anecdotal information suggests that these students often participate only marginally in the regular program, opting instead to work or enroll in college courses.)

FIGURE V.7

STUDENT-TO-STAFF RATIOS: ACADEMIC YEAR COMPONENT



Note: Ratios are based on calculations of full-time equivalents.

students to regular staff of about 15 to 1 (compared with 25 to 1 for African American projects) and a ratio of students to total staff of about 11 to 1 (compared with 16 to 1 for African American projects). All of these cross-project differences persist when we control for other basic project characteristics.

There is somewhat less variability across projects during the summer component. Almost three-quarters (72 percent) of respondents report ratios of students to total staff of less than six to 1 (Figure V.8). There are no differences in student-staff ratios across projects of various sizes, which again suggests that projects do not achieve economies of scale in staffing. Projects based at four-year schools tend to have fewer students per staff member (including mentors and tutors) than do projects based at two-year schools, but the difference is not substantial, amounting to an average of about one fewer student per staff member. Some projects rely more heavily than others on mentors and tutors to achieve low student-staff ratios during the summer. Native American projects, for example, have lower student-staff ratios than African American projects (3.8 to 1 versus 4.8 to 1) only when tutors and mentors are figured into the total number of staff. Similarly, ratios at African American projects are lower than those at Latino projects (4.8 to 1 versus 5.8 to 1) only when tutors and mentors are included in the staff count.

b. Frequency of Student-Staff Contact During the Academic Year

Project directors were also asked about the frequency of students' contact with various staff members during the academic year. Their responses indicate that students typically receive instruction once a week during the academic year. One-half (51 percent) of project directors report that students meet with instructors on a weekly basis (Figure V.9).[7] Counseling and tutoring tends to be offered somewhat more frequently; 44 percent of respondents report that students meet with counselors and tutors more than once a week. Students' contact with the director, assistant director, and mentors is typically less frequent.

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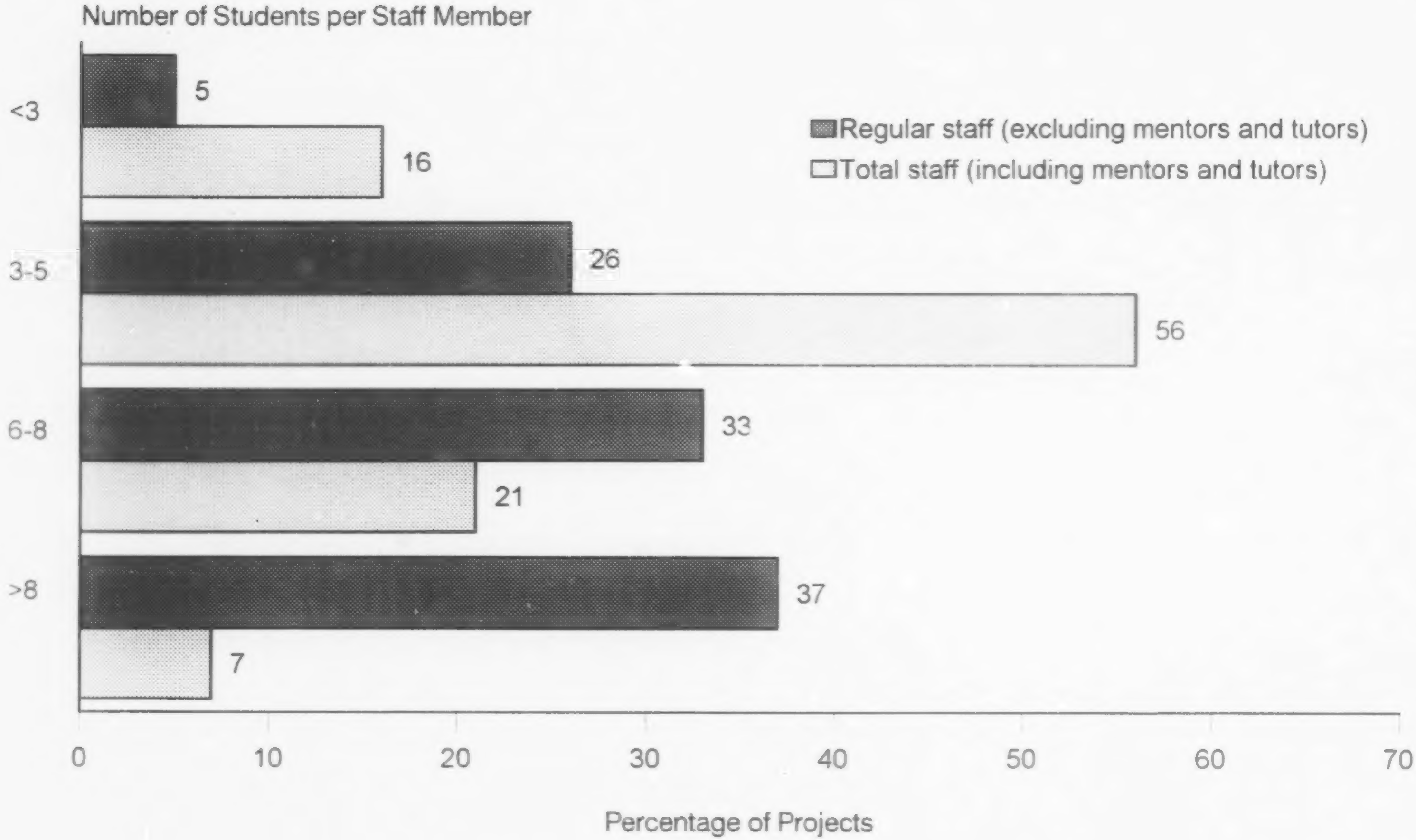
[7] Participant surveys conducted as part of the impact evaluation will provide more information about the length and content of these sessions.

FIGURE V.8

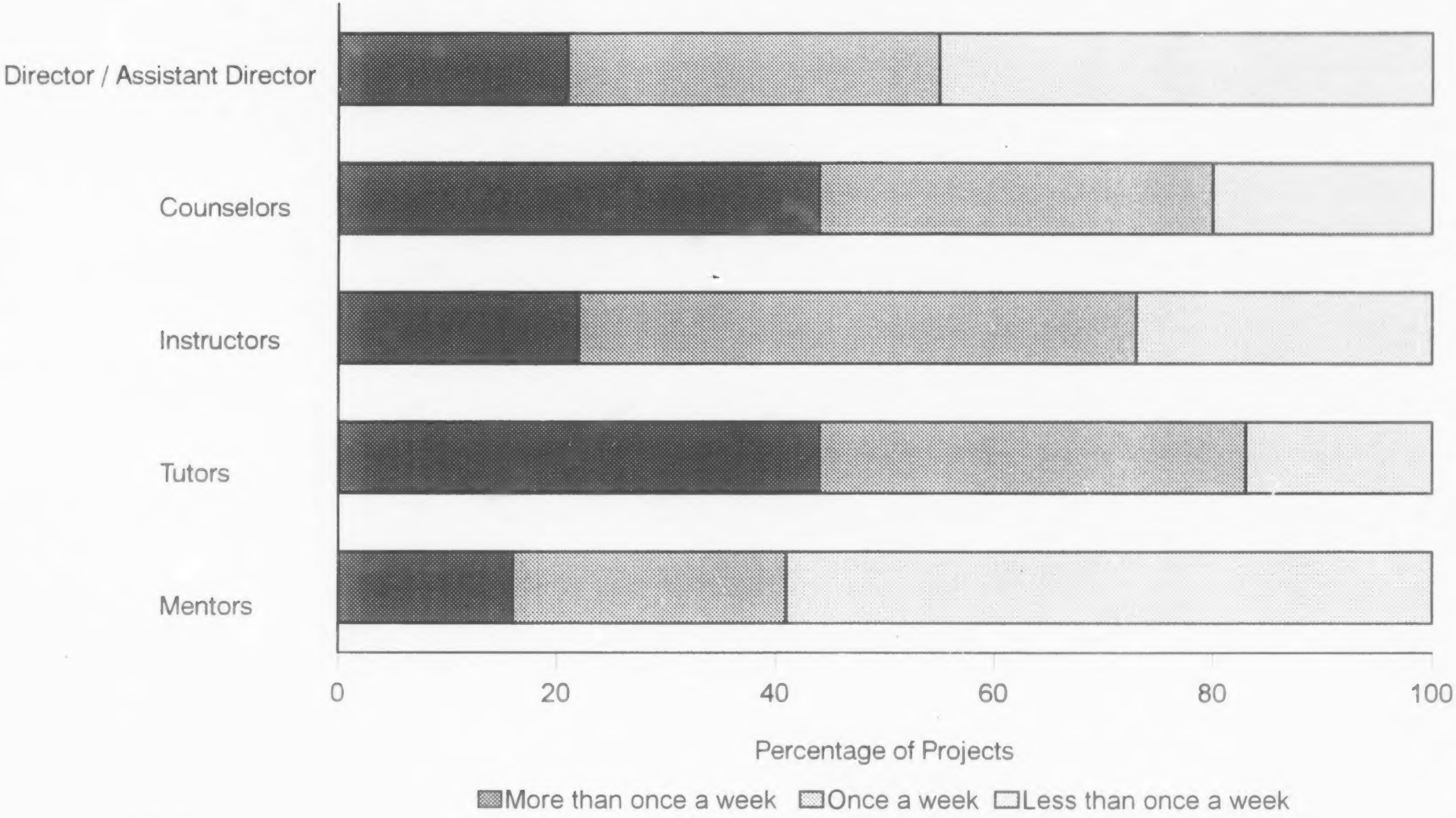
STUDENT-TO-STAFF RATIOS: SUMMER COMPONENT



Note: Ratios are based on calculations of full-time equivalents. Students enrolled in the summer bridge program are excluded.

FIGURE V.9

FREQUENCY OF PARTICIPANTS' CONTACT WITH STAFF DURING THE ACADEMIC YEAR



Forty-five percent of respondents report that students meet with the director or assistant director less than once a week; 59 percent report students have less than weekly contact with mentors.

As would be expected, the amount of contact students have with staff depends in part on the numbers of staff employed by a project. Projects with more teacher/counselors or teacher/instructors per participant report more frequent contact between students and instructors than do projects with lower teacher-student ratios. The number of mentors and tutors per student is also positively related to the reported amount of contact between tutors and students. Director-student contact and counselor-student contact, however, is associated not with the number of administrators or counselors per student, but with the number of ***other*** staff members per student. One possible explanation for this apparent anomaly is that other staff may free up directors and counselors to spend more time with students by assuming administrative duties that would otherwise fall to these staff members.

Project size also affects the amount of contact participants have with certain types of staff. Despite lower student-staff ratios, students at small projects have significantly less contact with counselors and instructors than do their peers in medium-size projects. The larger share of resources small projects must devote to project administration, as opposed to counseling and instruction, may explain this disparity. (In terms of FTEs, administrators comprise 39 percent of regular academic year staff in small projects, compared with 26 percent and 27 percent of staff in medium-size and large projects, respectively).

Student-staff contact also varies with predominant student ethnicity, even when we control for variations in other project characteristics, including staff-student ratios. Directors of projects with a predominantly white student body, for example, report less frequent contact between students and directors, counselors, instructors, and tutors than do African American projects, even when staff-student ratios are held constant. Although we can only conjecture as to why students in white projects tend to have less contact with staff, the reason may lie in the school settings from which participants are drawn. Most white projects (71 percent) are located in rural communities. Although there is generally no association between rural project location and staff-student contact during the academic year, rural projects that serve primarily white students may draw students from more widely dispersed high schools than do other rural projects. The information we have regarding target school relationships tends to support this hypothesis: While we do not know how widely scattered schools are, white rural projects typically recruit students from a larger number of schools than do other rural projects (a median of 10 versus 8 for other rural projects).

c. Methods of Instruction

Another question that arises with regard to staffing patterns concerns the relationship between staffing decisions and methods of instruction used. Do projects that frequently provide individualized instruction, for example, hire more teachers or tutors than do other projects? To examine the relationship between staffing patterns and instructional methods, we conducted a series of regression analyses, the results of which are summarized in Tables V.3 and V.4. Ratios of staff members (in each of the categories listed in the table) to students were calculated for each project that provided all the information necessary to compute the ratio. The ***pluses*** in the table indicate that frequent use of a particular instructional method is associated with a ***higher*** ratio of a particular type of staff (e.g., teacher/counselors) to students than is less frequent use of this method; ***minuses*** indicate that the instructional method is associated with a ***lower*** ratio of staff to students.

Certain patterns offer clues about the types of staff that provide particular kinds of instruction. Projects that frequently offer small-group instruction during the academic year, for example, report a larger number of tutors or mentors relative to the number of program participants than do projects that occasionally or never offer small-group instruction, but a smaller number of almost every other type of staff. This suggests that small groups are frequently led by tutors, not teachers. The absence of certain patterns is also instructive: While one might expect projects that frequently schedule large lecture-style classes during the summer to hire fewer teacher/instructors relative to projects that seldom or never offer

TABLE V.3

INSTRUCTIONAL METHODS AND STAFFING PATTERNS: ACADEMIC YEAR PROGRAM

(Staff-Student Ratios in Projects that Frequently Use Particular Methods Relative To Ratios in Projects That Do Not)

	Teacher/Counselors		Teacher/Instructors		Counselors		Other Staff		Mentors & Tutors	
	All	Full-time[a]	All	Full-time	All	Full-time	All	Full-time	All	Full-time
Small group instruction (68%)	–			–	–	–	–	–		+
Lectures (49%)			+					+		
Individualized instruction (28%)			+				+		+	
Computer-based instruction (12%)	+				–					
Independent study (10%)	–		+		+	+	–			
UB homework assignments (30%)			+	+	–					
Team teaching (17%)				–	+	+			+	+

NOTE: The percentage of projects that reports frequent use of an instructional method is given in parentheses.

[a] Results for this category of staff are omitted because only 8 percent of respondents report having any full-time teacher/counselor on staff during the academic year.

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TABLE V.4

INSTRUCTIONAL METHODS AND STAFFING PATTERNS: SUMMER PROGRAM

(Staff-Student Ratios in Projects that Frequently Use Particular Methods Relative To Ratios in Projects That Do Not)

	Teacher/Counselors		Teacher/Instructors		Counselors		Other Staff		Mentors & Tutors	
	All	Full-time	All	Full-time	All	Full-time	All	Full-time	All	Full-time
Small group instruction (88%)		–					–	–		
Individualized instruction (30%)	+	+			+	+	+			
Computer-based instruction (14%)							–	–	–	
Hands-on laboratory work (48%)	–		+		–	–				
UB homework assignments (76%)	+	+	+							+
Team teaching (28%)	+									

NOTE: The percentage of projects that reports frequent use of an instructional method is given in parentheses.

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lectures, no such relationship exists. (And in the academic year component, frequent use of lectures is associated with a ***higher*** ratio of teacher/instructors to students). This suggests that projects do not opt for lecture-style classes out of an interest in reducing staffing costs and that teacher-led lectures are a supplement to, rather than a substitute for, small group instruction.

Other patterns in the relationship of staff-student ratios to the use of particular instructional methods suggest that many projects make some tradeoff between teaching and counseling personnel, and presumably, between academic and affective program components. Holding constant the use of other instructional methods, the additional use of methods indicative of an academic focus is generally associated with a larger teaching staff but a smaller counseling staff. Projects with a sufficiently strong academic orientation to frequently assign homework during the academic year, for example, hire proportionately more teacher/instructors and fewer counselors than do projects that seldom or never assign homework (Table V.3). Similarly, projects that frequently involve students in hands-on laboratory work during the summer tend to hire proportionately more teacher/instructors and fewer counselors and teacher/counselors than do those that seldom or never use this method of instruction (Table V.4). Individualized instruction, on the other hand, appears to be associated with a stronger academic focus during the academic year but a more affective orientation during the summer. While projects that frequently provide individualized instruction during the academic year hire more teachers and tutors than do those that seldom or never provide this type of instruction, projects that frequently take this approach during the summer hire more counselors and teacher/counselors.

VI. RECRUITING AND ADMISSION

As projects recruit and select participants, they are forced to face the simple reality of scarce resources. In most cases, the number of eligible students in the area who might benefit from participating in Upward Bound far exceeds the number who can be served. As one project director observed in the comments section of the survey:

> No other organization [in our area] offers the extent of academic and personal services that Upward Bound does. Our target schools have a student-to-counselor ratio of 500 or 600 to one. Out of a total population of 669,016...8,016 families with dependent children [receive] aid. We are funded to help 60 students during the academic year and 55 during the summer session. Clearly, the need is great. Obviously we are only able to help a small part of this student population.

In this chapter, we explore how projects decide which of the many eligible students to recruit and serve. The first section looks at projects' admission policies, such as the grade levels at which new participants are admitted. The second examines recruiting efforts--the techniques projects use and the numbers of applications these efforts generate. The third section provides some basic descriptive data about applicants, and the fourth examines how projects screen applicants and select participants.

Overall, the survey data suggest that projects concentrate on enrolling students in the 9th and 10th grades, use a broad range of recruiting techniques, and attract a large pool of applicants. In choosing among applicants, projects tend to focus on students' motivation and behavior. Projects' interest in enrolling students of evident academic ability is less clear, but even those projects that de-emphasize academic accomplishment or ability generally expect students to demonstrate some motivation to achieve.

A. ADMISSION POLICY

- The vast majority of projects enroll new participants in the 9th and 10th grades

The survey posed two questions related to the timing of admissions. At what point in their high school or junior high school careers are students admitted to Upward Bound? And at what times of the year do new participants join the program?

1. Grade Levels of New Participants

One important policy issue projects must address concerns the length of "treatment" they will provide. Some analysts, for example, question the efficacy of serving students for only a year or two and believe new participants should be admitted only in their early years of high school. The survey data show project directors to be evenly divided on this issue. As shown in Figure VI.1, one-half admit at least some new participants as late as the 11th grade.[1] Higher proportions enroll new participants in the 9th and 10th grades. More than four-fifths try to serve at least some participants for four full years, starting in the 8th or 9th grade; only 17 percent of projects enroll no participants earlier than the 10th grade.

Projects hosted by two-year schools are somewhat more likely than those hosted by four-year schools to admit 11th graders. (Sixty percent of projects at two-year schools do so, compared with 50 percent of projects at four-year schools.) New projects (those in operation three to five years) are less likely than older projects to do so.

2. Timing of New Admissions

Two-thirds of all projects report that they admit students in both the summer and academic year. Most of those that admit new participants on an annual basis do so during the academic year; only one in ten projects admit students only in the summer. Large projects are more likely than others to enroll new participants only once a year. Almost two-fifths admit new participants only during the academic year, and one-fifth open the program to new enrollees only during the summer. Large projects may prefer annual

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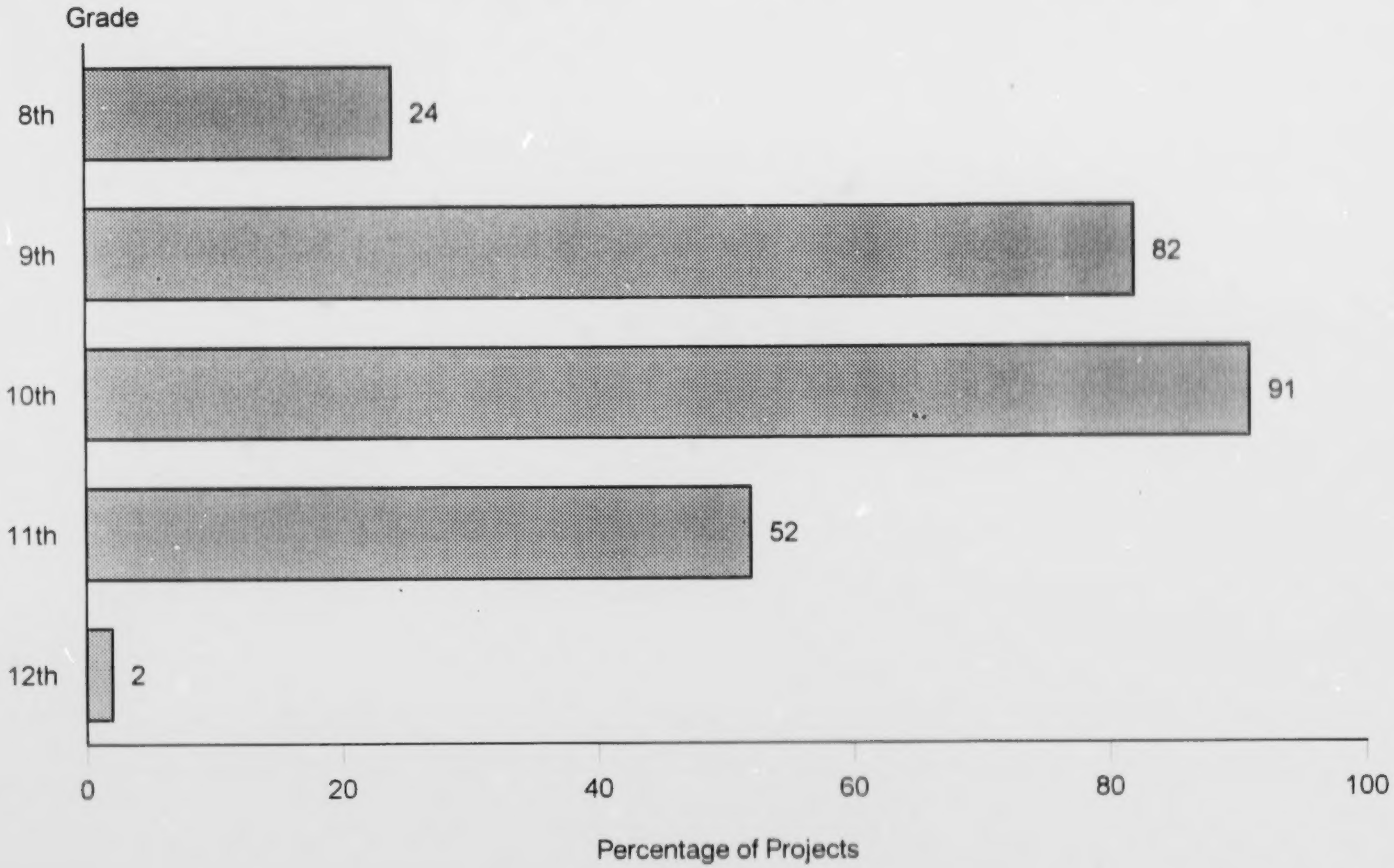
[1] Data on the number of students admitted at each grade level will be collected as part of the impact evaluation.

FIGURE VI.1
GRADE LEVELS AT WHICH STUDENTS ARE ADMITTED



admissions for several reasons. First, the cohesiveness of the group may be of greater concern in projects with more than 100 students, and administrators may believe that admitting new participants in a large group once a year will promote closer ties among the students. Students may also have a greater need for formal orientation when the program is large, and projects may prefer not to commit the necessary resources more than once a year.

B. RECRUITING

- Almost two-thirds of project directors report that they try to recruit as many students as possible and then screen for those who meet eligibility requirements, rather than focus their recruiting.
- Projects tend to use a range of techniques to publicize the program. Virtually all projects rely upon target school staff to identify candidates.
- Projects typically receive at least two applications for every opening.

The process of defining who the project will serve begins with recruiting--with the decisions projects make about how broadly to cast their net and the efforts they make to inform students, parents, and school staff about the opportunities offered by Upward Bound. In this section, we examine projects' recruiting strategies and the numbers of applications projects typically receive.

1. Recruiting Strategies and Techniques

In the survey, project directors were asked to characterize their general recruiting strategy and to indicate the specific outreach techniques they use. Almost two-thirds (62 percent) report that they try to reach as many students as possible and then screen for those who meet eligibility requirements.[2] One-third (34 percent) report targeting their recruiting efforts in some way. Most of this latter group (30 percent of respondents) characterize their strategy as seeking out students who are likely to meet the project's eligibility requirements. Only a handful (4 percent) of projects report that they recruit only about as many students as they have openings.

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[2] It is not clear whether the eligibility requirements directors had in mind in answering this question were the federal requirements, projects' own admission standards, or both.

Large projects are more likely than others to target their recruiting to students who are likely to qualify for the program. This difference in strategy may be explained by staffing constraints: If staff resources to review applications do not increase proportionate to the number of openings, large projects would naturally tend to focus their recruiting more narrowly than other projects.

Projects employ a wide variety of techniques to attract students (Figure VI.2). Recruiting efforts are typically multi-faceted: About three-quarters (73 percent) of all projects report using six or more of the techniques listed. Virtually all projects rely upon target school staff--teachers, guidance counselors, and others--to identify candidates for the program. Referrals through an "informal network" are also extremely common. In addition to tapping these referral networks, most projects make presentations about Upward Bound in both classes and assemblies at the target schools. Most also try to reach potential participants and their parents through presentations at community organizations. A sizeable proportion of projects publicize the program through newspaper stories or advertisements, but fewer than half use radio. Incentives such as cash or movie tickets are very rarely used to recruit students. Truly selective recruiting appears to be rare. Only about 8 percent of projects avoid all broad outreach (presentations at school assemblies or community organizations, and newspaper and radio coverage).

2. Numbers of Applicants

Projects' recruiting efforts are typically very successful, generating a large pool of applicants. As would be expected, the number of applications projects receive is closely related to the size of the project. On average, small projects receive about 50 applications; medium-size, about 95; and large, about 115.[3] (Each of these averages is skewed by the large numbers of applicants reported by a few projects; the

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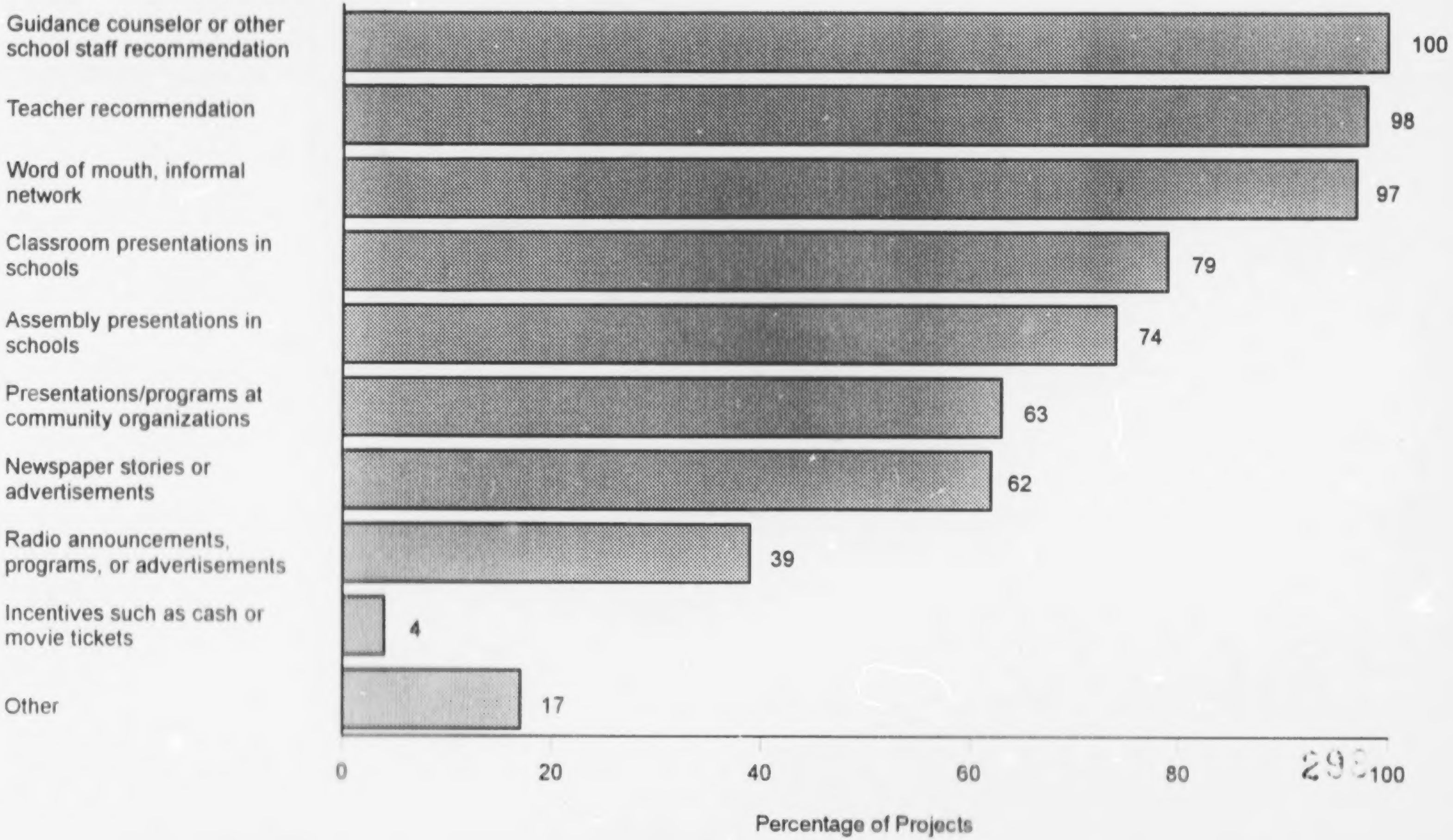
[3] The differences between small and medium-size projects and between small and large projects are statistically significant, but the difference between medium-size and large projects is not.

FIGURE VI.2

RECRUITING TECHNIQUES



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median numbers of applications received by small, medium-size, and large projects are 38, 59 and 85, respectively.)

On average, projects seek to fill about one-third of their funded slots each year; the median proportion of slots reported open (not filled by returning students) in 1992-93 ranged from about one-quarter in large projects to about one-third in small projects. Projects typically receive at least two applications for every opening.[4] Almost three-quarters of the projects included in our analysis enroll no more than half their applicants, and more than one-third enroll a quarter or fewer. Enrollment rates do not vary by project size; for small, medium-size, and large projects, the average percentage of applicants enrolled is about 38 percent and the median about 33 percent.

Enrollment rates are partly a function of projects' recruiting efforts. The more recruiting techniques projects use, the more applications they receive per opening. Projects that report using fewer than six of the techniques listed in the survey are twice as likely as other projects to receive two or fewer applications per opening. The reach of the techniques projects use also seems to influence the number of applications received. Projects that present information about Upward Bound to community groups tend to receive more applications per opening than those that do not. Over 40 percent of projects that address community groups (or school assemblies) receive four or more applications per opening, compared with less than 20 percent of projects that do not publicize the program in these ways.

Whether projects that enroll fewer of their applicants are more selective than those that admit more cannot be determined from the survey data. Obviously, selectivity depends not only on the *number* of applicants from whom the project can select but on the *quality* of those applicants. Data on students' qualifications were not collected in the grantee survey, but will be collected as part of the effectiveness study.

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[4] Enrollee-applicant ratios were calculated using data from the survey and from 1993 performance reports. To determine the number of new enrollees for the 1992-1993 academic year, we subtracted the number of returning students a project reported in the survey from the number of funded slots shown in the 1992-1993 performance reports. The enrollee-applicant ratio for each project was calculated by dividing the number of new enrollees by the number of applicants reported. Observations for which data were missing or inconsistent were eliminated from the analysis. The latter include projects that reported more returning students than they had funded slots, and projects that reported a higher number of new enrollees than they had applicants.

C. APPLICANT CHARACTERISTICS

- Girls tend to apply to Upward Bound in greater numbers than boys. At 27 percent of projects, boys comprise a quarter or less of the applicant pool.
- Projects generally attract a high proportion of applicants of the same race or ethnicity as the majority of the students already enrolled in the project.

While we must rely on the baseline survey of students who applied to Upward Bound in 1992-93 to develop a detailed picture of applicants, the grantee survey gathered some basic demographic data. Project directors were asked to estimate the proportion of applications they received in 1992 from students at different grade levels and of different races or ethnicities, as well as the proportion of applications received from male and female students and students with disabilities.

1. Sex

Almost four-fifths of projects report that they receive the majority of their applications from girls. More than one-quarter report a highly disproportionate share of applications from girls, with 25 percent or fewer applications from boys. While projects with male directors or a high proportion of male staff might be expected to attract more male applicants, neither the gender of the director nor the gender mix of the staff seems to affect the gender mix of applicants. Latino projects and racially/ethnically diverse projects, however, are more successful than others at attracting male applicants. Ninety-seven percent of Latino projects and 92 percent of racially/ethnically diverse projects report that they receive more than one-quarter of their applications from boys, compared with 84 percent of Asian projects, 79 percent of white projects, 64 percent of African American projects, and only 35 percent of Native American projects.

2. Grade Levels

Consistent with projects' focus on enrolling students in the 9th and 10th grades, most projects receive the majority of their applications from 9th and 10th graders (Figure VI.3). Two-thirds of all projects receive more than one-quarter of their applications from 9th graders; one-half report receiving more than one-quarter from 10th graders. By contrast, the vast majority of projects report few if any 8th or 11th grade applicants. Those that admit 8th or 11th graders are much more likely to report at least some applicants in these grades. Forty-four percent of the projects that admit 8th graders receive more than one-quarter of their applications from students at this grade level. But only 24 percent of those that admit 11th graders receive more than one-quarter of their applications from 11th graders.

3. Race and Ethnicity

The vast majority of projects report at least some African American and white applicants. Smaller proportions report any Latino, Asian or Native American applicants (Figure VI.4). Projects tend to attract large numbers of applicants of the same race or ethnicity as the majority of their current participants (Figure VI.5). Native American projects, in particular, tend to receive the vast majority of their applications from Native American students; none of these projects report any applications from African Americans or Asians, and 42 percent report no applications from whites. African American projects also tend to have a largely African American applicant pool; 70 percent of these projects report receiving more than three-quarters of their applications from African Americans. The majority of African American projects receive no applications from Latinos, Native Americans, or Asians, and about one-third receive no applications from white students. While most Latino and white projects receive most of their applications from Latino and white students, respectively, these projects tend not to receive more than three-quarters of their applications from any one group. However, Latino projects are more likely than average to report having no African American applicants; about one-third receive no applications from this group.

FIGURE VI.3
GRADE LEVELS OF APPLICANTS

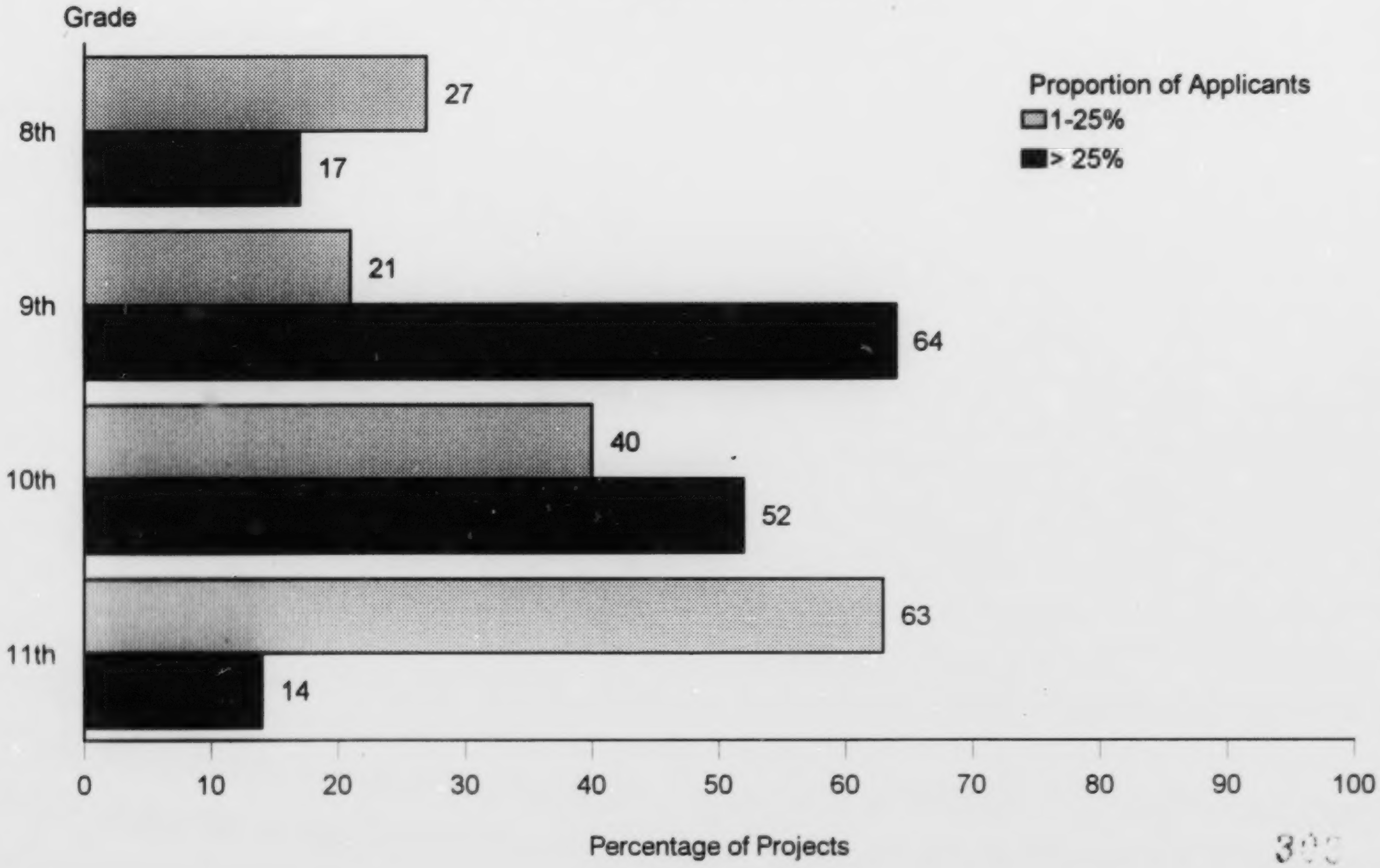


FIGURE VI.4
RACE/ETHNICITY OF APPLICANTS

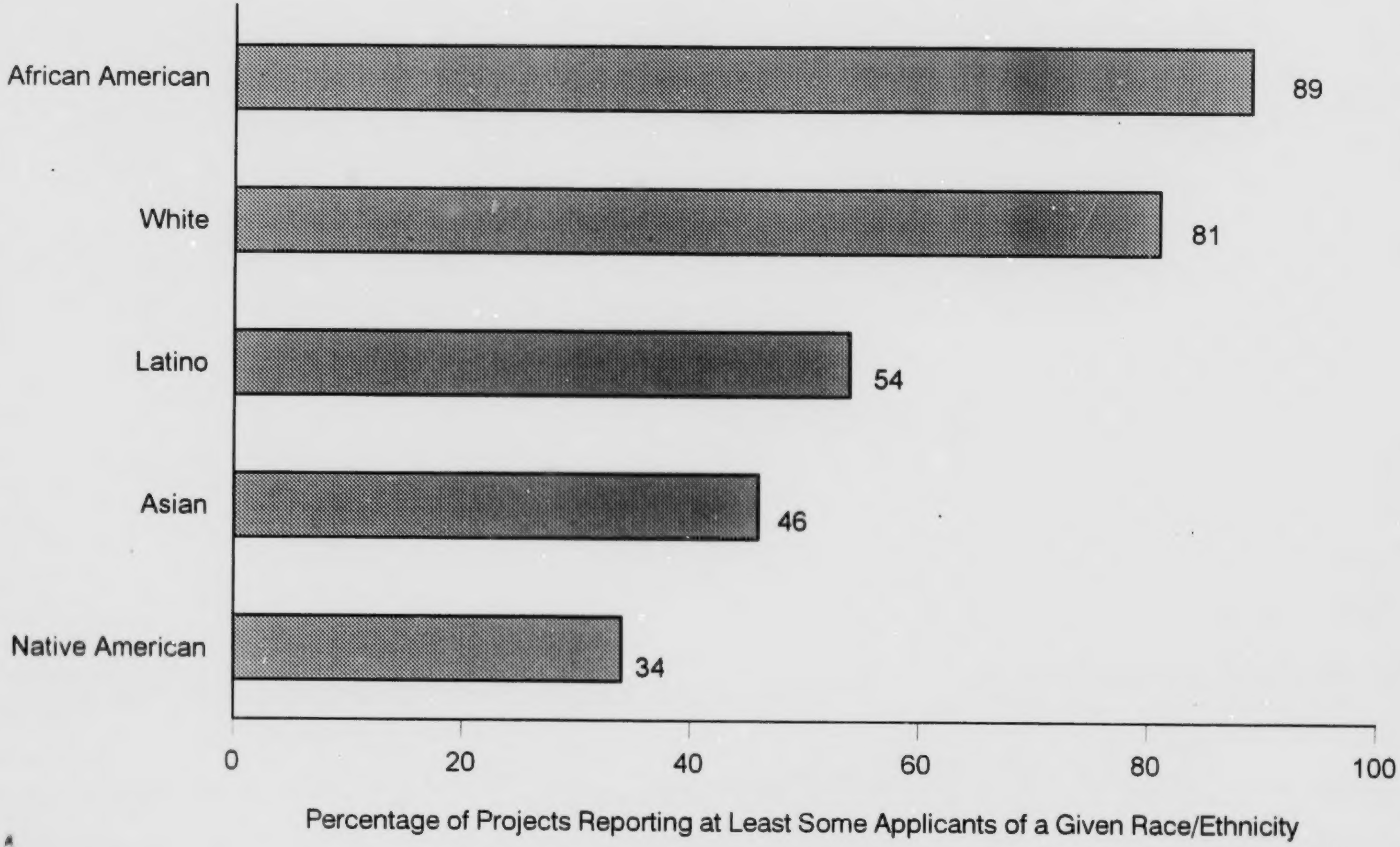
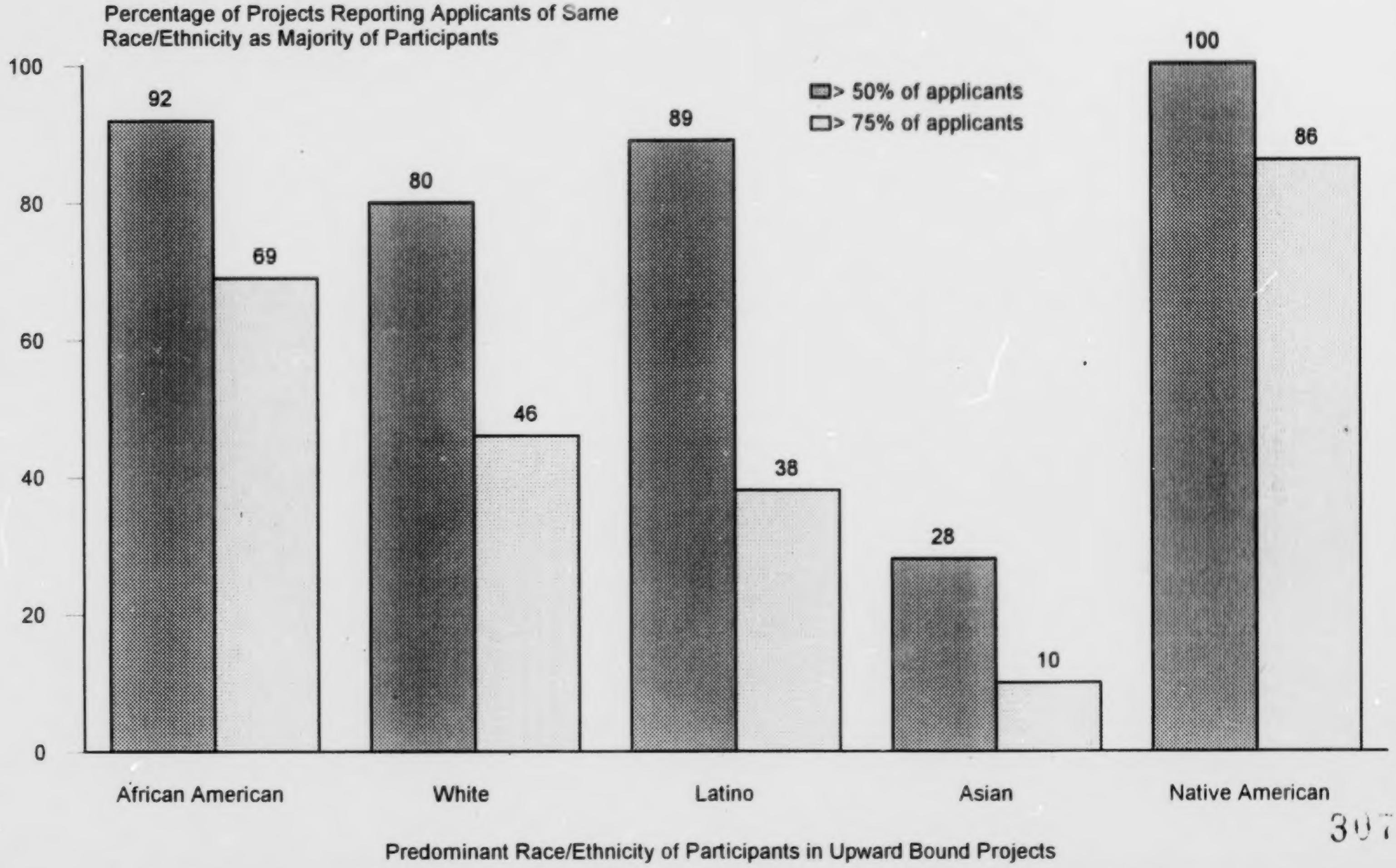


FIGURE VI.5
RACE/ETHNICITY OF APPLICANTS, BY PREDOMINANT RACE/ETHNICITY OF PARTICIPANTS



Note: The first pair of bars shows that 92 percent of projects that serve primarily African American students receive more than one-half of their applications from African American students; and 69 percent receive more than three-quarters of their applications from African American students.

4. Disability Status

More than two-thirds (70 percent) of projects report no applicants with physical or mental disabilities, and almost none receive more than a quarter of their applications from students with disabilities.

D. SCREENING AND SELECTING STUDENTS

- Target school staff appear to play an important role not only in recruiting but in selecting Upward Bound participants.
- Projects typically seek students who are motivated to achieve and present few behavioral problems. Two-thirds of all respondents give considerable weight to applicants' aspirations or disqualify those who demonstrate no specific interest in college. Three-fifths disqualify applicants with any history of such behavioral problems as substance abuse or gang activity.
- Applicants' academic performance is an important consideration for about one-half of all projects. However, it is not clear that these projects target high achievers. Only about one-third of all projects set minimum academic standards, and these may not be particularly rigorous.
- Projects that serve different racial or ethnic groups tend to emphasize different admission criteria.

Because Upward Bound can serve only a small fraction of the students who apply, projects must define the type of student--or the mix of students--they wish to serve. One important question that has been frequently raised about the program concerns the extent to which projects enroll students who are most likely to benefit from the program, rather than those who are most in need of support services. The results of the baseline survey of students who applied to Upward Bound in 1992-93 indicate that eligible applicants tend to have higher educational aspirations than other disadvantaged students; other preliminary evidence (Myers 1991) suggests that Upward Bound participants are also better prepared academically than their counterparts who do not enter the program. In this section, we investigate how the selection process might account for these differences. We first examine projects' basic approaches to screening and selecting students and then describe some of the themes and variations than can be observed in projects' strategies.

1. Basic Approaches

Project directors were asked to indicate which factors (other than inability to meet poverty and first generation requirements) would disqualify an applicant from further consideration for the program and then to rate the importance they attach to such factors as grades and financial need in choosing among the remaining applicants.

a. Disqualifying Factors

In contrast to the RTI study, which found that projects applied few absolute admission criteria, the vast majority of project directors who participated in the current survey (86 percent) report that they exclude some applicants from consideration on the basis of one or more of the disqualification factors listed in the questionnaire. The specific reasons for which projects reject applicants vary considerably, however; no disqualification factor is cited by even one-half of all projects, and many are cited by fewer than one-third (Figure VI.6). Projects are most unified in their emphasis on motivation: Students' failure to demonstrate a specific interest in college is the most common reason for disqualification. By contrast, very few projects (14 percent) rely on ability or achievement test scores to screen applicants; equally few (11 percent) require a minimum level of English proficiency.

Although no single disqualifying factor is cited by a majority of projects, most projects reject applicants who present one or more of a *range* of behavioral problems (Table VI.1). This suggests that although the problems students present may vary and projects' specific concerns therefore differ, students' behavior is a primary consideration for most projects. Just over one-third of projects set minimum academic standards, usually in terms of grades rather than test scores. Because projects were not asked to specify the level of achievement required, we cannot know how rigorous these standards are or how

FIGURE VI.6
DISQUALIFYING FACTORS

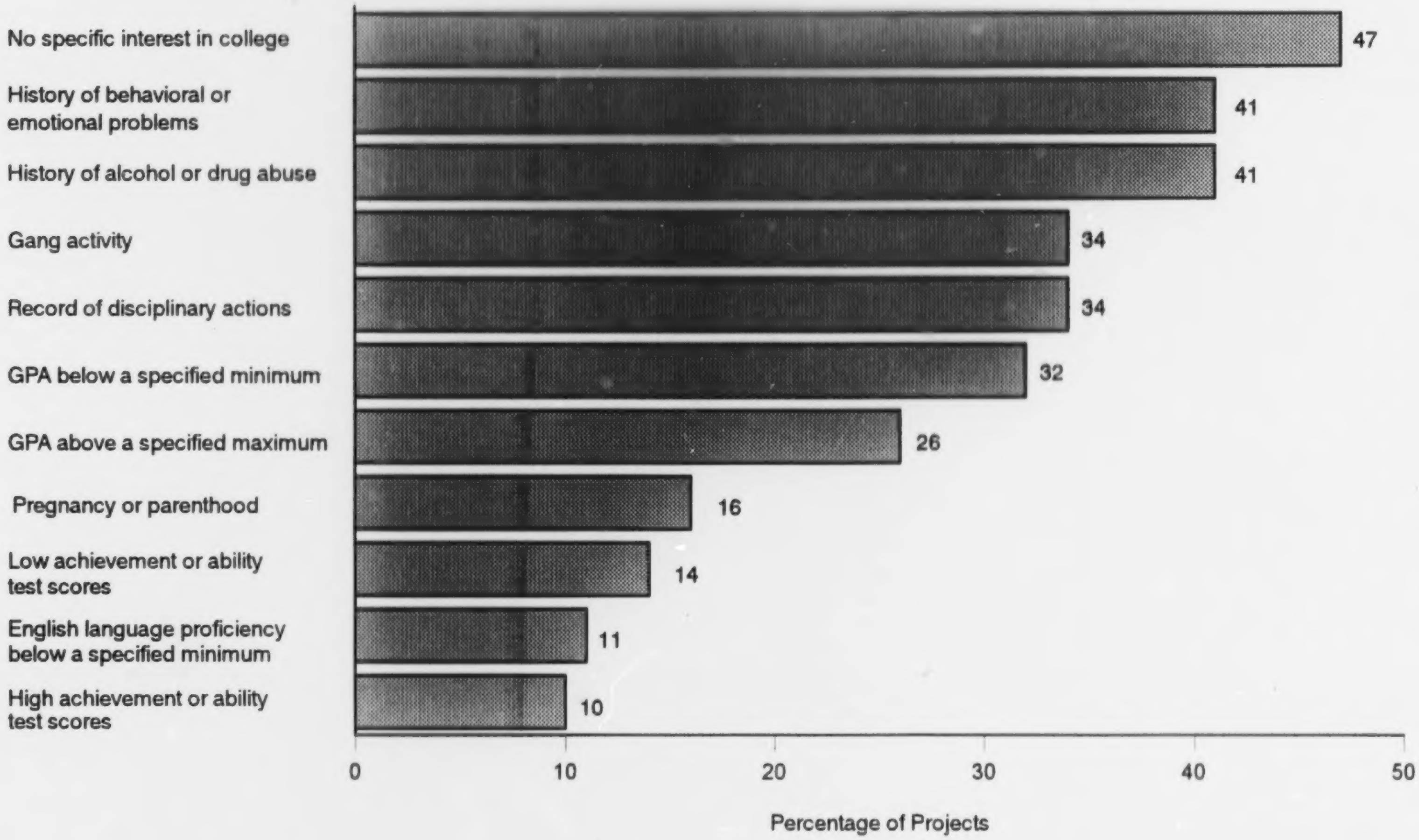


TABLE VI.1

BEHAVIORAL AND ACADEMIC DISQUALIFICATION FACTORS

(Percentage Reporting Disqualification of Applicants With One or More Problems)

Factor	Percentage of Projects
Behavioral Problems	62
History of alcohol or drug abuse	
Record of disciplinary actions	
Gang activity	
History of behavioral or emotional problems	
Academic Deficiencies	37
GPA below specified minimum	
Low achievement or ability test scores	

much they vary across projects. However, almost one-half of those that set minimum academic standards (15 percent of all projects) also disqualify applicants with *high* grades or test scores, which suggests that these projects target moderate, rather than high, achievers. A total of 28 percent of projects specifically exclude high achieving students; half of these (13 percent of all projects) set no minimum standards.

The survey data provide few clues as to why some projects exclude some students from consideration while others review all applications. The number of applications projects must review does not appear to be a factor: Projects that receive a large number of applications are actually less likely than those that receive fewer to disqualify students for either academic or behavioral reasons.

b. Admission Criteria

Table VI.2 shows the five admission criteria most often rated "very important" by projects. At first glance, projects' priorities appear to be quite diverse. The only criterion deemed "very important" by at least one-half of all projects is recommendations from school staff. Slightly fewer than one-half of all respondents cite students' aspirations as a very important factor, and just over one-third cite relative financial need. Somewhat fewer say that grades or the racial balance of the group are very important considerations in selecting participants.

However, the vast majority of projects report that they give at least some consideration to students' grades and aspirations in making their admission decisions. (Grades are considered at least somewhat important by 91 percent of projects and aspirations by 87 percent.) An even higher proportion of projects (95 percent) attach at least some importance to staff recommendations. Projects are somewhat more likely than not to give at least some consideration to relative financial need, the gender balance of the group, and students' enrollment in college preparatory courses in making admission decisions. (These factors are rated at least somewhat important by 74, 64, and 58 percent of projects, respectively.)

Projects are almost evenly divided in terms of whether they attach any importance to the recommendations of other Upward Bound students, the racial or ethnic balance of the group, or the

TABLE VI.2

ADMISSION FACTORS RATED VERY IMPORTANT

Factor	Percentage of Projects
Recommendations of school staff	50
Aspirations	47
Relative financial need	38
Grades	30
Racial/ethnic balance of the group	18

composition of students' households (single-parent versus two-parent). But they tend not to consider students' leadership ability, English proficiency, or their having a sibling in Upward Bound important. The admission criteria most frequently ranked "very unimportant" are shown in Table VI.3. Of particular note is the fraction of projects that attach no importance to the racial or ethnic balance of the group; approximately the same proportion of projects say this factor is unimportant as indicate it is very important (22 and 18 percent, respectively).

2. Themes

Many of the variations in projects' admission strategies appear to reflect differences in procedure rather than philosophy. For example, projects that are interested in recruiting academically talented students may reject applicants whose GPAs are below a specified minimum, pay particular attention to grades in reviewing applications, or both. To examine whether projects use different disqualification and admission criteria to accomplish similar purposes, we conducted a factor analysis using a subset of these variables. Results of that analysis, which examined correlations among disqualification and admission criteria, are reflected in Table VI.4.

An analysis of projects' admission strategies finds five general themes:

- ***Motivation to attend college.*** Students' motivation tends to be a primary consideration for projects. Between those that consider aspirations very important and those that disqualify applicants who fail to demonstrate sufficient interest in college, two-thirds of all respondents attach considerable importance to students' motivation to achieve.

- ***Behavior.*** Students' behavior also tends to be a key concern. Three-fifths of projects reject applicants who exhibit any of the problem behaviors listed in the survey.

- ***Academic achievement or ability.***[5] Projects' emphasis on academic accomplishments is more equivocal. About one-half of all projects appear to target students of at least moderate academic ability, either by disqualifying applicants with low grades or test scores or by giving considerable weight to grades or students' enrollment in college

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[5] Projects' use of standardized test scores to screen applicants was interpreted as an emphasis on academic ability.

TABLE VI.3

ADMISSION FACTORS RATED VERY UNIMPORTANT

Factor	Percentage of Projects
Student from single-parent household	35
Sibling in Upward Bound	32
English proficiency	25
Racial/ethnic balance of the group	22
Leadership ability	18

TABLE VI.4

SELECTION CRITERIA: COMMON THEMES
(Percentage of Projects Reporting Use of One or More Criteria)

Factors	Percent
Motivation	
Disqualification Factors	68
No specific interest in college	
Admission Factors	
Aspirations	
Behavior	
Disqualification Factors	61
History of alcohol or drug abuse	
Record of disciplinary actions	
Gang activity	
History of behavioral or emotional problems	
Academic Achievement or Ability	
Disqualification Factors	51
GPA below a specified minimum	
Low achievement or ability test scores	
Admission Factors	
Grades	
Enrollment in college preparatory courses	
Financial Need	
Admission Factors	33
Relative financial need	
Group Composition	
Admission Factors	22
Racial/ethnic balance	
Gender balance	

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prep courses. (If we eliminate grades from the equation on the grounds that we cannot know the ***level*** of achievement sought, the proportion of projects that emphasizes academic achievement or ability slips from 51 to 44 percent.) But many of those projects that do not give enormous weight to academic accomplishments or ability require applicants to at least demonstrate some motivation to achieve. Four-fifths of all respondents emphasize either motivation ***or*** academic achievement; about one-third emphasize both.

- ***Relative financial need.*** Need tends not to be a primary concern and is considered very important by just one-third of projects. Moreover, projects tend not to emphasize this criterion over others related to students' achievement, motivation, or behavior. In fact, projects that attach considerable importance to financial need are more likely than others to emphasize motivation.

- ***Group composition.*** The gender or racial/ethnic balance of the group is considered very important by just one-fifth of projects. And like financial need, this criterion is seldom rated more important than academic achievement, motivation, or behavior.

In general, our findings suggest a strong tendency for projects to select students who are unlikely to present behavioral problems and who seem motivated to make the effort necessary to succeed in college. This emphasis suggests a shift in projects' priorities since the RTI study was conducted in the mid-1970s. While the RTI researchers found that many projects used low motivation as a basis for selection, the current findings indicate that only a minority of projects are now inclined to work with poorly motivated students. Students' current academic standing is somewhat less likely to be a determining factor in the selection process. Although one-half of all projects give considerable weight to applicants' grades or test scores, only one-third disqualify applicants who fail to meet minimum academic standards. Financial need and the composition of the group are generally no more than secondary considerations.

Another general theme in projects' admission strategies is the centrality of target school staff in both recruiting and admissions. Not only are teachers and guidance counselors heavily involved in recruiting candidates for Upward Bound, but their recommendations carry considerable weight with one-half of all projects and are considered at least somewhat important by almost all. This reliance on school staff to both recruit and evaluate candidates suggests that the two processes are not always distinct. Although the survey did not address the issue of applicant screening by school staff, and the data therefore do not permit us to conclude that staff typically screen applicants before making referrals, target school staff may focus their recruiting efforts on students they can enthusiastically recommend to the program. Given the longstanding relationship between most target schools and Upward Bound projects, school staff are apt to have a clear understanding of the types of students projects are seeking and may recruit applicants accordingly.

3. Variations Across Projects

Despite these strong central tendencies, the specific eligibility and admission criteria projects apply vary with project size and with the predominant race/ethnicity of the student body. These differences persist even when we control for the influence of other basic project characteristics, such as location and years in operation.

Small projects are more willing than medium-size projects to work with students who have a history of behavioral or emotional problems. Only about one-fifth of small projects, compared with about two-fifths of medium-size projects, indicate that such a history would disqualify an applicant from further consideration. Large projects are more than twice as likely as medium-size projects (58 percent versus 26 percent) to emphasize financial need.

The cultural context in which projects operate seems to have a strong influence on the types of students selected to participate in Upward Bound. Some of the most pronounced differences in admission strategies emerge across projects that serve different ethnic or racial groups. Table VI.5 shows the use of certain eligibility and admission criteria relative to use by African American projects, which constitute the majority (53 percent) of the projects in our analysis sample.[6]

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[6] Only those criteria whose use varies across projects are listed in the table. The percentage of African American projects that report use of these criteria appears in column two. The differences indicated by pluses and minuses persist when we control for other basic project characteristics and are statistically significant at the 95 percent level.

TABLE VI.5

USE OF DISQUALIFICATION AND ADMISSION FACTORS BY ALL PROJECTS RELATIVE TO USE BY AFRICAN-AMERICAN PROJECTS

	Predominant Student Ethnicity					
Factor	African American	White	Latino	Asian	Native American	Mixed Race
	Academic Achievement or Ability					
Disqualification Factors						
GPA below a specified minimum	39%	–		+		
GPA above a specified maximum	25			+	–	
High achievement or ability test scores	9		+			
Admission Factors						
Grades	37	–		+		
Enrollment in college preparatory courses	21	–	–		–	–
English proficiency	7	–	–	+	–	–
	Behavior					
Disqualification Factors						
History of alcohol or drug abuse	55	–	–		–	–
History of behavioral or emotional problems	47				–	
Record of disciplinary actions	38	–				
	Financial Need					
Admission Factors						
Relative financial need	27		+		+	
	Group Composition					
Admission Factors						
Racial balance	18				–	+
Gender balance	17	–			–	

NOTE: African American projects are used as the basis for comparison because they comprise the largest group. The percentage of African American projects that use a particular disqualification factor or consider an admission factor very important is shown in column 2. Plus signs in subsequent columns indicate a greater propensity to use a particular disqualification or admission factor; minus signs indicate a lesser tendency to use a disqualification or admission factor.

Projects with a predominantly Asian student body are more likely than African American projects to emphasize academic achievement or ability and are equally likely to disqualify applicants with a history of behavioral problems. By contrast, white, Latino, Native American and mixed race projects place less emphasis on applicants' academic ability or achievement than do African American projects. White projects in particular are less likely to emphasize various academic criteria. (Latino projects are more likely than African American to target moderate to low achievers by disqualifying students with high ability or achievement test scores. However, only about one-fifth of Latino projects do so, and Latino projects are no more likely than African American to disqualify applicants whose grades are high.) White, Latino, Native American, and mixed race projects also seem less concerned than African American projects about potential behavioral problems, particularly those associated with a history of alcohol or drug abuse.

For both Native American and Latino projects, financial need is a key concern. These projects are more than twice as likely as African American projects to indicate that relative financial need is a very important consideration in their admission decisions.

Projects that serve a racially or ethnically diverse group of students are more likely than African American projects to report that the racial composition of the group is a very important factor in the admission process, which suggests that the racial or ethnic diversity of these projects is not accidental. Native American projects are less likely than African American projects to pay particular attention to the racial/ethnic balance of the group, and neither Native American nor white projects are as likely as African American to consider gender balance very important.

Projects' concerns about group composition are related to the composition of the applicant pool. But while one might expect projects with a very low proportion of male applicants to be more concerned about gender balance than those with a more evenly divided applicant pool, the reverse is true. Projects that receive one-quarter or fewer of their applications from males are less likely to give much consideration to gender balance in selecting participants. This suggests that projects that place a high priority on achieving a balanced group tend to address the issue at the recruiting stage, by encouraging males to apply.

Concerns about racial or ethnic balance also seem to vary with the composition of the applicant pool. Projects that receive a very high proportion of their applications (more than 75 percent) from African American or Native American students are less likely than other projects to consider racial or ethnic balance at all important. While we can only speculate as to why these projects give little weight to racial or ethnic balance, project location offers one possible explanation: Projects with a very high proportion of African American or Native American applicants may be located in areas where the population is highly homogeneous and racial/ethnic balance is difficult to achieve. An alternative explanation is that these projects are dedicated to serving a particular racial or ethnic group and consequently focus their recruiting on that group.

VII. OUTCOMES FROM UPWARD BOUND

The primary goal of Upward Bound is to better prepare disadvantaged students for college. Dropout behavior and college attendance patterns are two outcomes that can indicate the extent to which this goal is achieved for Upward Bound participants and graduates. While data from the grantee survey do not indicate how participating students would have fared in the absence of Upward Bound, they do indicate the average outcomes for participants, as well as differences in outcomes for different types of Upward Bound projects.

In this chapter, we examine these outcomes as reported by project directors or their designees who completed the grantee questionnaire. We start by focusing on the share of Upward Bound participants who drop out of the program, and on the timing and reasons for such behavior. We consider the extent to which Upward Bound projects have standards for student performance that affect the likelihood that students will remain in the program, and we investigate whether these standards are more likely to be applied to student behavior in the project or in the secondary school. Our analysis also focuses on college attendance patterns, providing information on whether Upward Bound graduates attend two or four-year colleges, and the extent to which they attend the host institution. We conclude by looking at whether certain project characteristics are strongly associated with differences in multiple outcomes.

A. RETENTION AND DROPOUT BEHAVIOR IN UPWARD BOUND PROGRAMS

- Projects report that Upward Bound participants are most likely to drop out during the 11th grade before the start of the summer program.
- Projects typically reported that students drop out of the program to take a job during the summer or academic year.
- Projects reported an average dropout rate of about one-fifth of nongraduating students between the start of the 1991-92 academic year program and the start of the 1992-93 academic year program.
- Dropout rates tend to be higher at projects that offer work experience during only part of the year rather than year-round.

Improving the college prospects of disadvantaged students depends, in part, on ensuring that they complete the Upward Bound program. However, continued participation is as much a function of student choice as it is of a project's determination, based on certain standards for students performance, that any given student should remain in the program. This section addresses retention and dropout behavior in terms of both of these factors.

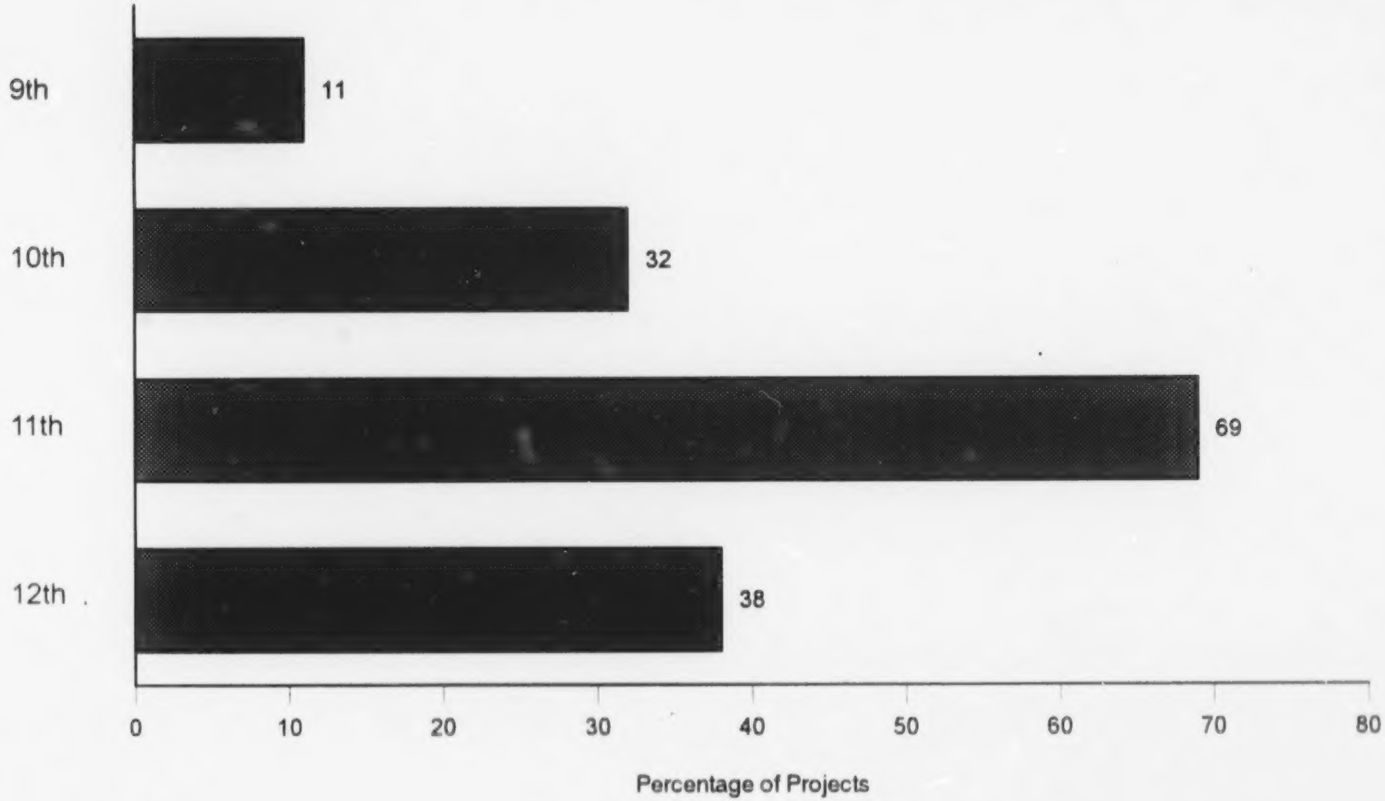
1. The Role of Student Choice in Dropout Behavior

The response of project directors to survey questions on dropout behavior explains when, and to a great extent, why students drop out of Upward Bound. The survey data also inform us about the proportion of students who drop out of the program, that is, the proportion of non-graduates who leave Upward Bound each year.

Over two-thirds of Upward Bound projects (69 percent) reported that students are most likely to drop out of Upward Bound during the 11th grade (Figure VII.1). They typically do so before the start of the summer program according to about half of the projects (46 percent) indicating this point in time (Figure

FIGURE VII.1

GRADES IN WHICH STUDENTS ARE MOST LIKELY TO DROP OUT OF UPWARD BOUND



VII.2).[1] This evidence suggests that these students may be leaving Upward Bound in order to work during the summer. Unlike many 10th graders, most 11th graders are 16 years old and hence eligible for employment, and because school is often closed in the summer, many students consider working part- or full-time during this season. In fact, more than three-fourths (77 percent) of projects said that the decision to take after-school or summer employment at least moderately affected the decision to drop out of the program (Figure VII.3). Almost three-fifths (57 percent) reported that employment decisions were of "major" importance in affecting dropout behavior. Of all the other factors listed as a moderate or major influence on dropout behavior, not one was cited by more than half of Upward Bound projects.

Upward Bound projects offering year-round work experience programs (through the Job Training Partnership Act, work-study, or other partnerships) were less likely to report that students drop out of Upward Bound in order to take after-school or summer jobs. However, only half of all Upward Bound projects (48 percent) offer work experience programs, and only one-third (32 percent) of projects that offer work experience programs offer these programs year round. Two-thirds (65 percent) of projects offering year-round work experience programs reported that employment is a moderate or major reason for dropping out of Upward Bound, compared with three-quarters (77 percent) of projects offering work experience programs during only part of the year, and four-fifths (81 percent) of projects not offering work experience programs.

Over two-fifths (44 percent) of Upward Bound projects reported that dropouts were moderately likely to leave the program to participate in extracurricular activities. Another two-fifths (41 percent) of projects said that dropouts were moderately likely to have been asked to leave the program. In the following section we analyze the performance standards that projects use to determine students' continued participating in Upward Bound.

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[1] The percentages reported in Figures VII.1 and VII.2 do not add up to 100, since projects could indicate multiple grades and times when students are most likely to drop out.

FIGURE VII.2

TIMES THAT STUDENTS ARE MOST LIKELY TO DROP OUT OF UPWARD BOUND

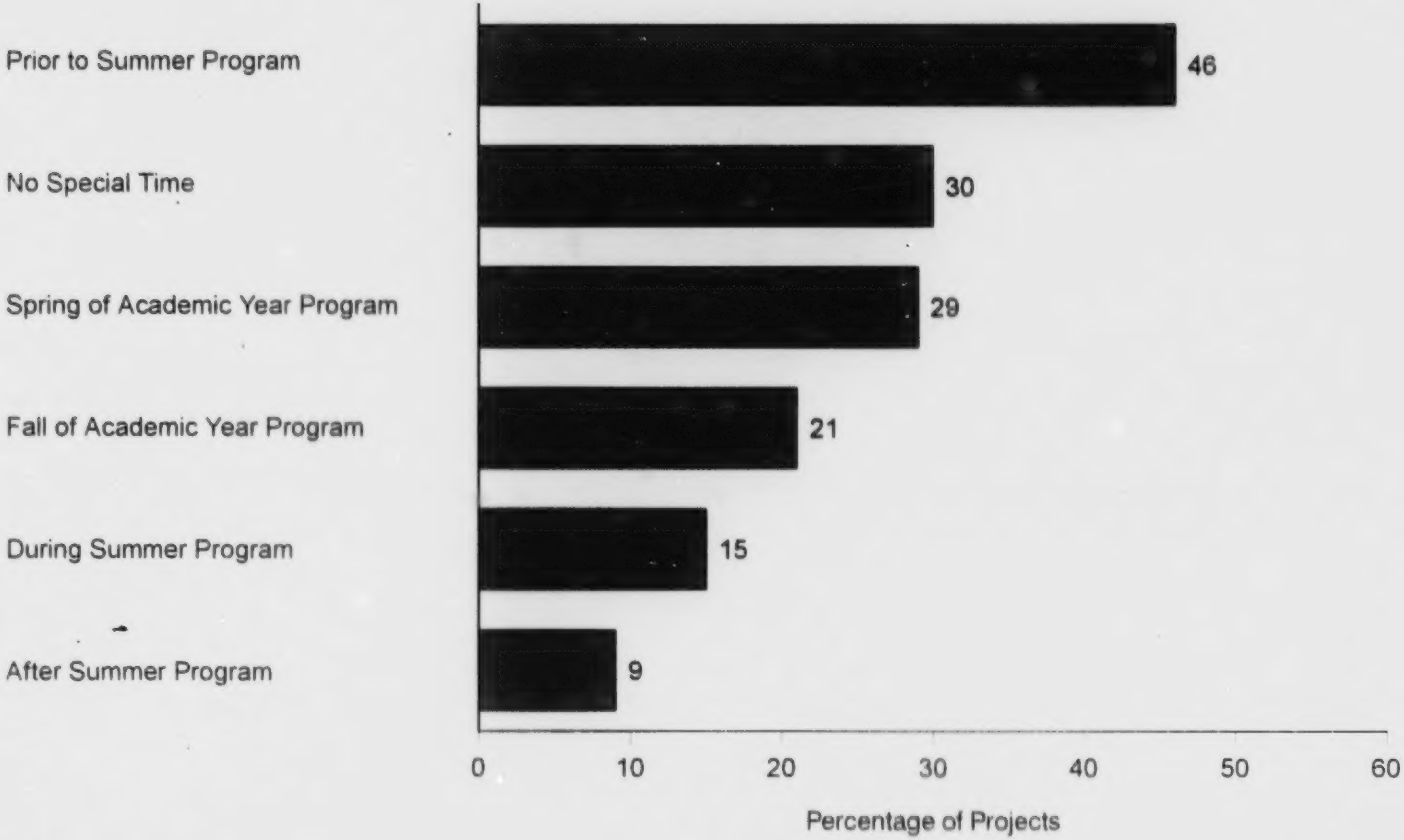
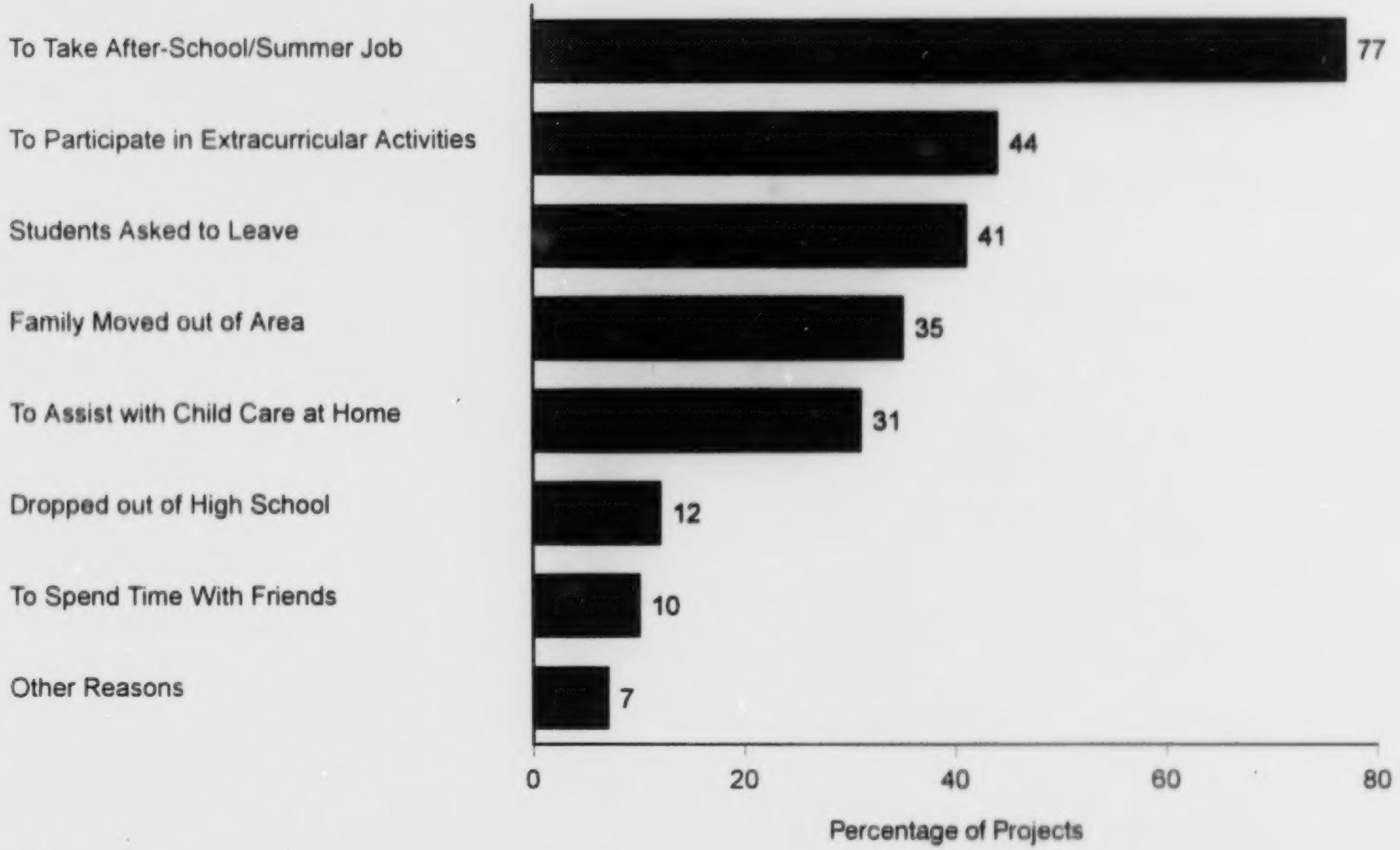


FIGURE VII.3
MODERATE/MAJOR REASONS FOR DROPPING OUT OF UPWARD BOUND



2. The Role of Standards for Student Performance in Dropout Behavior

An Upward Bound project may make a decision regarding students' continued participation in the program on the basis of their attendance records, discipline problems, and academic performance. Although Upward Bound projects generally hold students to some such standards, the importance of each in determining whether a student continues in Upward Bound differs by project. The standards are more likely to be applied to student behavior in the Upward Bound program than to student behavior in the school itself. In addition to differing in *which* standards they emphasize, projects also differ in terms of the *number* of measures they use to judge performance.

Almost all projects (95 percent) indicated that a student's Upward Bound attendance record is "very important" in terms of continuity in the program, compared with the two-thirds (65 percent) of projects that identified the school attendance record as similarly important (Figure VII.4). While over four-fifths (85 percent) of projects said that a student's academic performance in Upward Bound is very important for continued participation, only two-fifths (42 percent) said the same of academic performance in school. Similar shares of projects indicated that discipline problems in Upward Bound (61 percent) and in school (67 percent) are very important factors that affect students' continued participation in the program.

Almost all projects (99 percent) emphasize at least one measure of performance as being "very important" to continued participation in Upward Bound, and two-thirds (65 percent) emphasize four or more performance measures (Figure VII.5). One-third of projects (31 percent) reported that they consider all of the measures listed in the survey as "very important" to continued participation in Upward Bound.

Projects that are math/science oriented tend to consider significantly more measures of performance than are considered by other Upward Bound projects (Table VII.1). Projects with a strong math/science focus consider an average of 4.6 aspects of performance, compared with 3.7 emphases for projects with a structured focus and 3.9 emphases for projects with a foundational or unstructured focus. Otherwise, the number of performance emphases does not differ significantly according to project characteristics.

FIGURE VII.4

STANDARDS FOR STUDENTS' CONTINUATION IN UPWARD BOUND

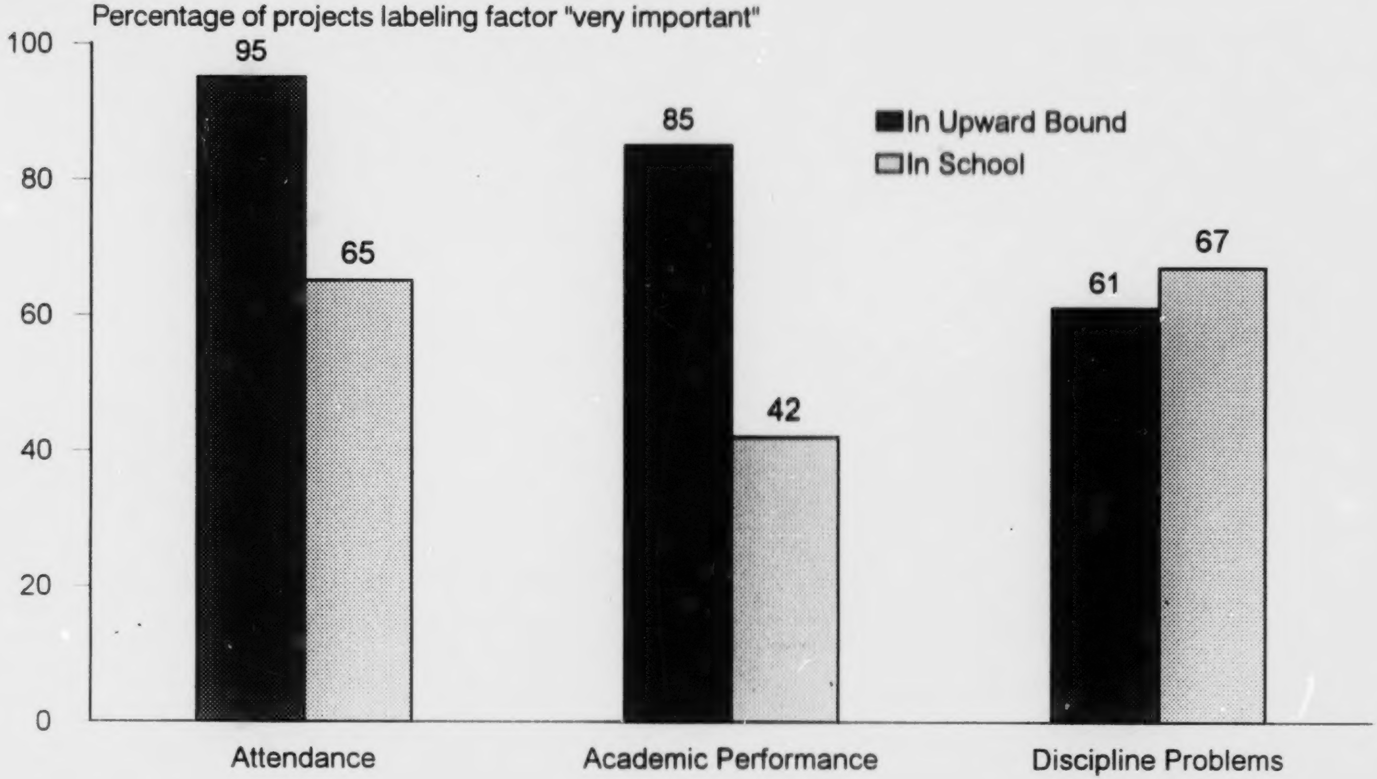


FIGURE VII.5

NUMBER OF STANDARDS RATED "VERY IMPORTANT" FOR STUDENTS' CONTINUATION IN UPWARD BOUND

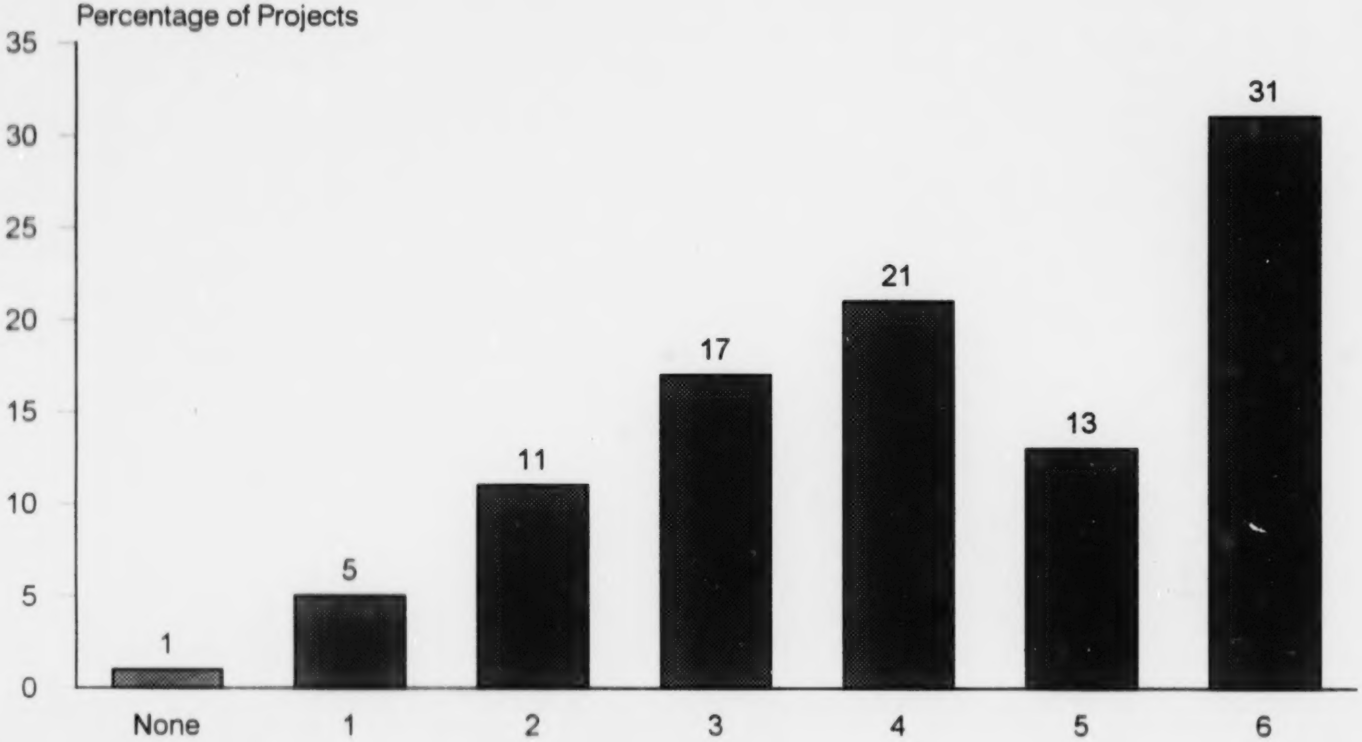


TABLE VII.1

NUMBER OF PERFORMANCE EMPHASES[1], BY PROJECT TYPE

Type of Project	Average Number of Emphases
Rural	4.1
Urban	4.2
Based at four-year host institutions	4.3
Based at two-year host institutions	3.7
Small (no more than 60 students)	4.1
Medium (61 to 99 students)	4.1
Large (100 or more students)	4.3
Young (2 to 5 years old)	4.5
Middle-aged (6 to 20 years old)	4.1
Mature (over 20 years old)	4.0
Math/science focus	4.6
Foundational focus	3.9
Structured focus	3.7
Unstructured focus	3.9
No work experience	4.1
Part-year work experience	4.1
Year-round work experience	4.5
Residential nonbridge summer program	4.2
No residential nonbridge summer program	3.9
All projects	**4.2**
Number of observations	**175**

[1] Number of performance emphases is the number of factors considered "very important" for students' continuation in the Upward Bound program (minimum = 0, maximum = 6).

3. The Proportion of Students Dropping Out of Upward Bound

The Upward Bound dropout rate calculated here is the share of nongraduating students from the 1991-92 academic program or the 1992 summer nonbridge program who did not return for 1992-93 academic year.[2] While the survey of Upward Bound grantees does not directly ask for each project's dropout rate, it includes several questions from which the rates can be calculated.[3] The average dropout rate is 19 percent; that is, an average of about one-fifth of the students who participated in Upward Bound during the 1991-92 academic year or 1992 nonbridge summer session, and who did not graduate from high school at the end of the 1991-92 academic year, did not return for the 1992-93 academic year program.

Upward Bound dropout rates differ according to several project classifications: urban location, type of host institution, size, focus of course requirements (as defined in Chapter V), availability of work experience programs, availability of residential summer programs, and number of student performance emphases (Table VII.2). We performed multivariate analyses to control for the independent effects of project characteristics dropout rates. The results of these analyses are reported in their entirety in the Appendix, with statistically significant outcomes described here.

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[2] Out of a maximum of 182 possible cases, 137 of the projects surveyed (about three-fourths,) provided information that could be used to estimate a dropout rate. Some projects reported numbers deemed unusable for calculating dropout rates because they led to negative values. Controlling for other project characteristics, rural projects, Asian American projects, and mixed ethnicity projects were more likely to provide usable dropout information than were other types of Upward Bound projects. There is no evidence that host institution type, project size, or project age significantly affected the probability of obtaining usable information.

[3] These questions are: (1) How many students participated in at least some portion of the 1991-92 academic year program or 1992 summer nonbridge program? (2) How many students in the 1991-92 academic year program graduated from high school? and (3) How many students in the 1991-92 academic year program or 1992 summer non-bridge program returned for the 1992-93 academic year?

TABLE VII.2

AVERAGE DROPOUT RATES[1] FROM UPWARD BOUND PROGRAMS, BY PROJECT TYPE

Type of Project	Average Dropout Rate
Rural	18 %
Urban	20
Based at four-year host institutions	19
Based at two-year host institutions	21
Small (no more than 60 students)	21
Medium (61 to 99 students)	18
Large (100 or more students)	22
Young (2 to 5 years old)	17
Middle-aged(6 to 20 years old)	19
Mature (over 20 years old)	20
Math/science focus	24
Foundational focus	17
Structured focus	21
Unstructured focus	15
No work experience	17
Part-year work experience	25
Year-round work experience	17
Residential non bridge summer program	19
Residential nonbridge summer program	21
0-2 student performance emphases	18
3-4 student performance emphases	19
5-6 student performance emphases	20
All	**19**
Number of observations	**137**

[1] Dropout rate equals the percentage of students from the 1991-92 program that neither graduated from high school nor returned to Upward Bound by the fall of 1992.

Dropout rates are lower for projects with year-round, as opposed to part-year, work experience programs, and higher for projects with a math/science, as opposed to an unstructured, program focus[4]:

- ***Differences by Work Experience Offerings.*** Dropout rates tend to be lower for projects offering work experience programs year-round (17 percent) than for projects offering work experience programs for only part of the year (25 percent); this difference remains just as large after holding other grantee characteristics constant.

- ***Differences by Course Requirements.*** The average dropout rates for projects with a math/science focus (24 percent) is significantly higher than the average dropout rates for projects with an unstructured focus (15 percent). (These program emphases are defined in Chapter III, page 50.) Other program emphases generally resulted in a range of outcomes in between those for math/science and unstructured programs. These results hold even after controlling for a variety of grantee and student characteristics (including the larger number of performance emphases characteristic of math/science-oriented programs).

B. COLLEGE ATTENDANCE PATTERNS

- Upward Bound projects report that the vast majority of their graduates attend two- or four-year colleges.

- The share of graduates attending two-year colleges is dramatically higher for programs hosted by two-year institutions than for programs hosted by four-year institutions.

- The share of graduates attending four-year colleges is dramatically higher for programs hosted by four-year institutions than for programs hosted by two-year institutions.

- Most Upward Bound projects report that, in a typical year, at least three graduates enroll at the host institution.

- The average share of graduates attending the host institution is about one-third, regardless of the type of host institution.

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[4] Except where noted, all differences that we report in the text of this chapter are statistically significant at the .05 level, even after controlling for the contribution of other observed project characteristics. In other words, we can reject, with under a 5 percent chance of being wrong, the hypothesis that two groups of projects have the same average dropout rate, and we can reasonably conclude that there are systematic differences between the two types of projects in question.

Our analysis of college attendance patterns of Upward Bound graduates focuses on the choices students make after they graduate. Specifically, we examined the average share of Upward Bound graduates that attends college, the proportion that goes to four-year colleges as opposed to two-year colleges, and the number of graduates that enrolls at the host institution

1. Enrollment at Two- and Four-Year Colleges

Upward Bound projects reported that the vast majority of their graduates attends two- or four-year postsecondary institutions, consistent with the objectives of the Upward Bound program. On average, more than four-fifths of each project's graduates (86 percent) attend either a two- or a four-year college, with two-thirds (66 percent) attending the latter (Figure VII.6). Only one-seventh (14 percent) of Upward Bound graduates does not pursue a college education.

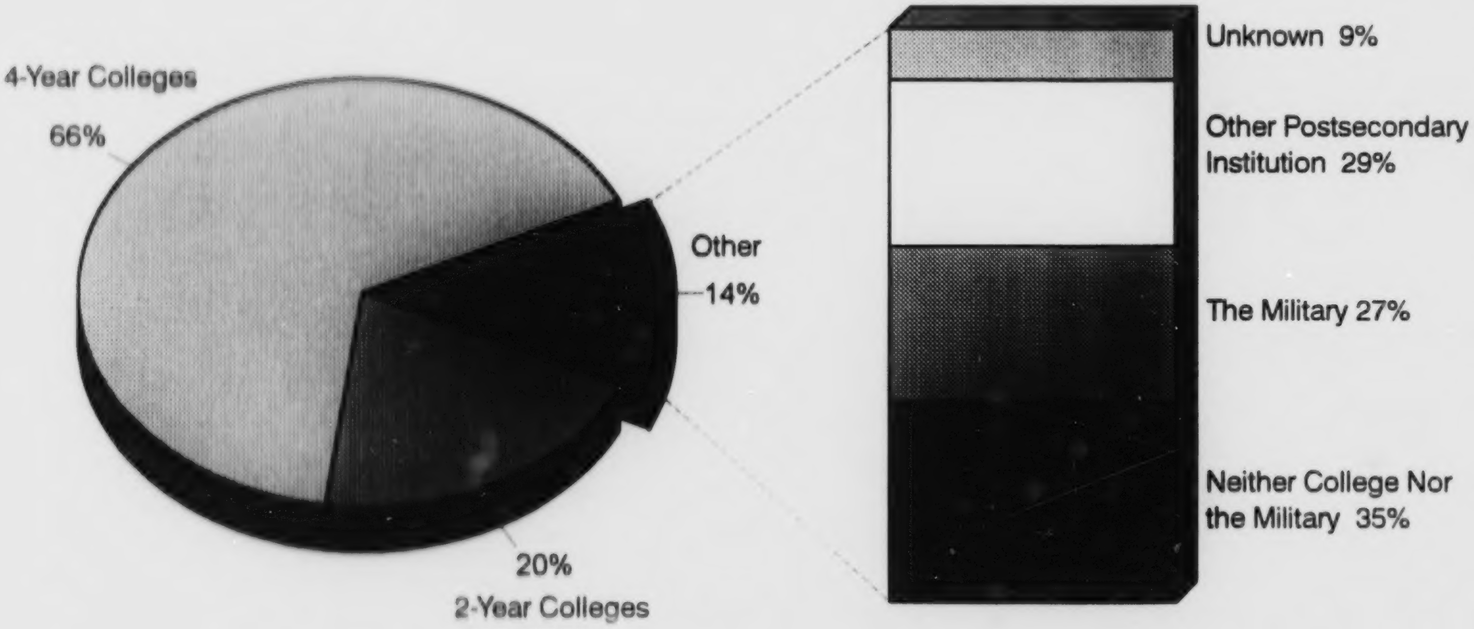
There is little variation in the overall college attendance rate across different types of projects (Table VII.3, first column of values). When we control for other observed project characteristics, higher college attendance rates tend to be reported by projects that are 6 to 20 years old and that have a large number of student performance emphases:

- ***Differences by Project Age.*** "Middle-aged" projects reported higher college attendance rates (91 percent) than either young projects (79 percent) or mature projects (85 percent).
- ***Differences by Student Performance Emphases.*** Projects with five or six student performance emphases report higher college attendance rates (88 percent) than projects with three or four student performance emphases (82 percent).

We might want to distinguish the share of Upward Bound graduates attending a two-year college from the share of Upward Bound graduates attending a four-year college. Since graduates of four-year

FIGURE VII.6

WHERE UPWARD BOUND GRADUATES GO
Mean Percentage of Upward Bound Graduates, by Grantee



colleges and universities have, on average, higher earnings than graduates of two-year colleges,[5] attendance at four-year colleges might reflect greater economic opportunities for Upward Bound graduates.

Two-year college attendance rates are dramatically higher for projects based at two-year institutions than for projects based at four-year institutions (Table VII.3, second column). Projects hosted by two-year institutions reported that 44 percent of their graduates attend two-year colleges, compared with only 14 percent for projects hosted by four-year institutions. Even after other observed project characteristics are controlled for, over nine-tenths of this difference remains.

Just as two-year college attendance rates are higher for graduates from projects hosted by two-year institutions, four-year college attendance rates are dramatically higher for graduates from projects hosted by four-year institutions (Table VII.3, third column).[6] Four-year college attendance rates also tend to be higher at larger projects:

- ***Differences by Type of Host Institution.*** The average four-year college attendance rate for projects hosted by four-year institutions is 73 percent, compared with only 38 percent for projects hosted by two-year institutions. This 35 percentage-point difference remains after other observed project characteristics are controlled for.

- ***Differences by Project Size.*** Upward Bound projects with 100 or more students report higher four-year college attendance rates (75 percent) than either medium-size projects (67 percent) or small projects (56 percent). After controlling for other project characteristics, over half of these differences remain.

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[5] For persons 18 years old and older who reported some income as of March 1993, individuals whose highest level of college was an associate degree had an average annual income of $23,838, while individuals whose highest level of college was a bachelor's degree had an average annual income of $32,753 (U. S. Department of Commerce, 1994).

[6] These findings reflect only the initial college enrollment patterns of Upward Bound graduates; it is possible that students who enroll initially in two-year institutions subsequently enroll in four-year institutions.

TABLE VII.3

COLLEGE ATTENDANCE RATES[1], BY PROJECT TYPE

Type of Project	Average College Attendance Rate		
	Overall	Two-Year	Four-Year
Rural	81 %	23 %	58 %
Urban	89	18	70
Based at four-year host institutions	87	14	73
Based at two-year host institutions	82	44	38
Small (no more than 60 students)	86	30	56
Medium (61 to 99 students)	85	19	67
Large (100 or more students)	89	14	75
Young (2 to 5 years old)	79	33	46
Middle-aged (6 to 20 years old)	91	23	68
Mature (over 20 years old)	85	15	70
Math/science focus	89	17	72
Foundational focus	85	21	65
Structured focus	86	25	61
Unstructured focus	84	21	62
No work experience	84	23	61
Part-year work experience	88	16	71
Year-round work experience	91	19	72
Resid. nonbridge summer program	86	19	67
No res. nonbridge summer program	90	25	64
0-2 student performance emphases	86	28	58
3-4 student performance emphases	83	18	65
5-6 student performance emphases	88	18	71
All projects	**86**	**20**	**66**
Number of observations	**179**	**179**	**179**

[1] College attendance rate is the average share of an Upward Bound project's graduates that attends a two- or four-year college following graduation.

2. Enrollment at the Host Institution

We examined enrollment at the host institution because it is reasonable to expect that intensive exposure to a particular college or university through Upward Bound might make students more inclined to apply to, and, if accepted, attend that institution rather than another that they may be less aware of. In addition, the possibility of Upward Bound participants being more likely to attend the host institution might even be a factor in some colleges' decisions to become Upward Bound hosts.

Almost all projects (97 percent) reported that, in a "typical year," at least one graduate of the Upward Bound program typically enrolls at the host institution (Figure VII.7). More than three-fourths of projects (78 percent) reported that at least three graduates of the program typically enroll at the host institution, and about two-thirds of projects (64 percent) reported that between three and ten graduates typically enroll at the host institution.

While the typical number of graduates attending the host institution appears to be small in absolute terms, the approximate percentage of graduates attending the institution is slightly over one-third (36 percent). The share of Upward Bound graduates attending the host institution is larger for rural projects and for projects with part-year, as opposed to year-round, work experience programs (Table VII.4):[7]

- ***Differences by Urban Location.*** Compared with urban projects, projects in rural areas reported that a larger share of graduates attends the host institution (43 percent versus 33 percent). This difference remains just as large after other project characteristics are held constant.

- ***Differences by Work Experience Programs.*** Upward Bound projects offering work experience programs for only part of the year report higher rates of attendance at the host institution than projects offering such programs year-round (39 percent versus 27 percent). This difference remains just as large after other project characteristics are held constant.

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[7] The approximate share of graduates attending the host institution was calculated using the approximate number of graduates attending the host institution divided by the number of graduates from the 1991-92 year. Since respondents were not asked to specify the precise number of graduates attending the host institution, responses of "1 or 2" were set equal to 1.5, responses of "3 to 10" were set equal to 6.5, and responses of "over 10" were set equal to 13.5. The rate of attendance at the host was constrained not to exceed the percentage of graduates attending colleges of the same type as the host institution (e.g., two-year colleges).

FIGURE VII.7

NUMBER OF UPWARD BOUND GRADUATES ATTENDING THE HOST INSTITUTION

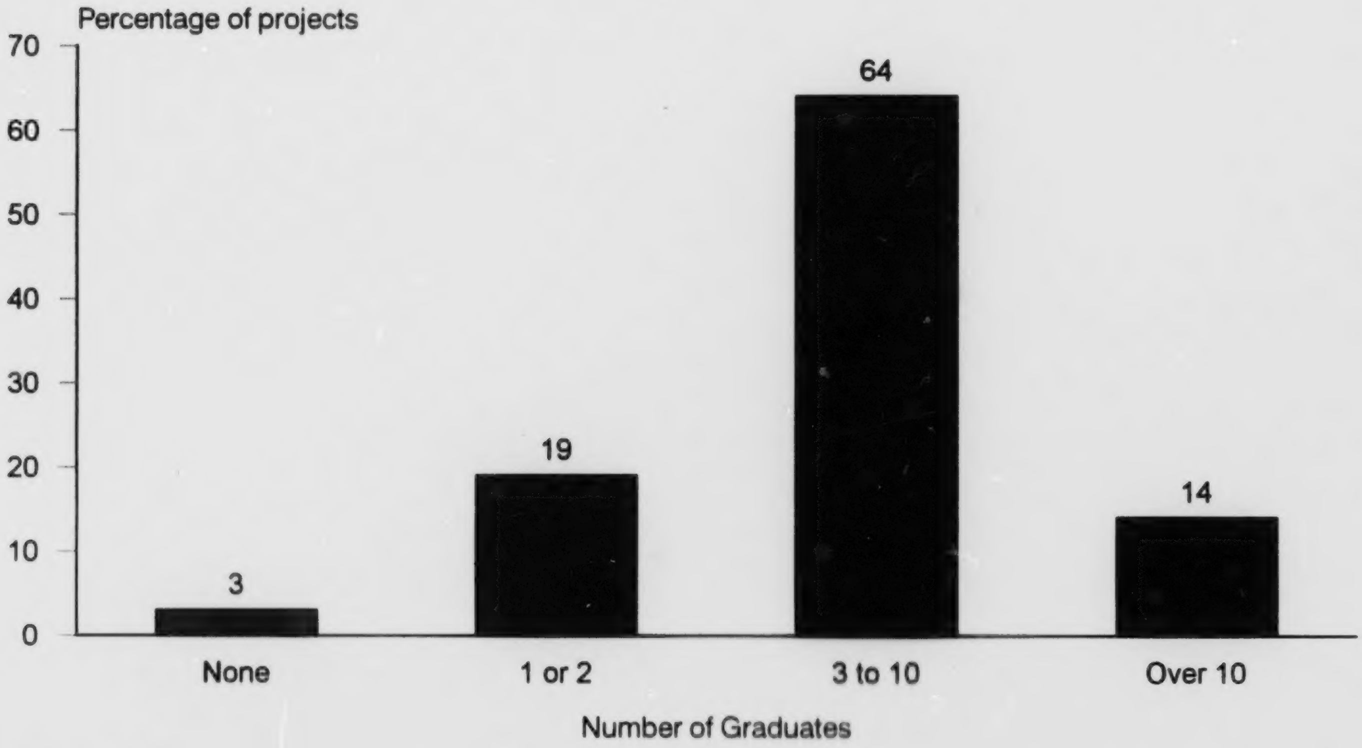

TABLE VII.4

ATTENDANCE AT HOST INSTITUTION[1], BY PROJECT TYPE

Type of Project	Percentage of Graduates Attending Host Institution (approximate)
Rural	43
Urban	33
Based at four-year host institutions	36
Based at two-year host institutions	37
Small (no more than 60 students)	37
Medium (61 to 99 students)	39
Large (100 or more students)	30
Young (2 to 5 years old)	47
Middle-aged (6 to 20 years old)	35
Mature (over 20 years old)	35
Math/science focus	34
Foundational focus	42
Structured focus	35
Unstructured focus	35
No work experience	37
Part-year work experience	38
Year-round work experience	29
Residential nonbridge summer program	36
No residential nonbridge summer program	40
0-2 student performance emphases	38
3-4 student performance emphases	36
5-6 student performance emphases	37
All projects	**36**
Number of observations	**179**

[1] Attendance at host institution is the average percentage of an Upward Bound project's graduates that attends the host institution following graduation.

The share of graduates attending the host institution does not differ appreciably by host institution type. For programs hosted by four-year institutions, an average of 36 percent of graduates attend the host, compared with 37 percent of graduates for programs hosted by two-year institutions. While these shares are similar, they represent very different portions of the pool of graduates attending a college of the same type as the host institution (Figure VII.8). For Upward Bound programs at four-year host institutions, about one-half (49 percent) of graduates who attend four-year colleges and universities go to the host institution. For Upward Bound programs at two-year host institutions, over four-fifths (84 percent) of graduates who attend two-year colleges and universities go to the host institution.

C. LINKS BETWEEN KEY PROJECT CHARACTERISTICS AND MULTIPLE OUTCOMES

- Even after holding a variety of project-related characteristics constant, Upward Bound projects at two-year host institutions report significantly higher two-year college attendance rates, and significantly lower four-year college attendance rates, than projects at four-year hosts.

- Controlling for other observed project characteristics, projects with 100 or more students report higher four-year and overall college attendance rates than projects with between 61 and 99 students.

- Controlling for other observed project characteristics, projects with more regular staff per student report higher four-year and overall college attendance rates than other Upward Bound projects.

The preceding sections have documented how certain key project characteristics, such as host institution type, are associated with meaningful differences in dropout rates or reported college attendance behavior. In this section we attempt to consider all of these outcomes together to identify those project characteristics that are associated with significant differences in multiple outcomes from Upward Bound. Besides the characteristics mentioned in previous sections, we examine the relationship between additional factors, particularly the staffing ratios of projects, and projects' reported outcomes.

FIGURE VII.8

COLLEGE ATTENDANCE PATTERNS OF UPWARD BOUND GRADUATES, BY TYPE OF HOST INSTITUTION

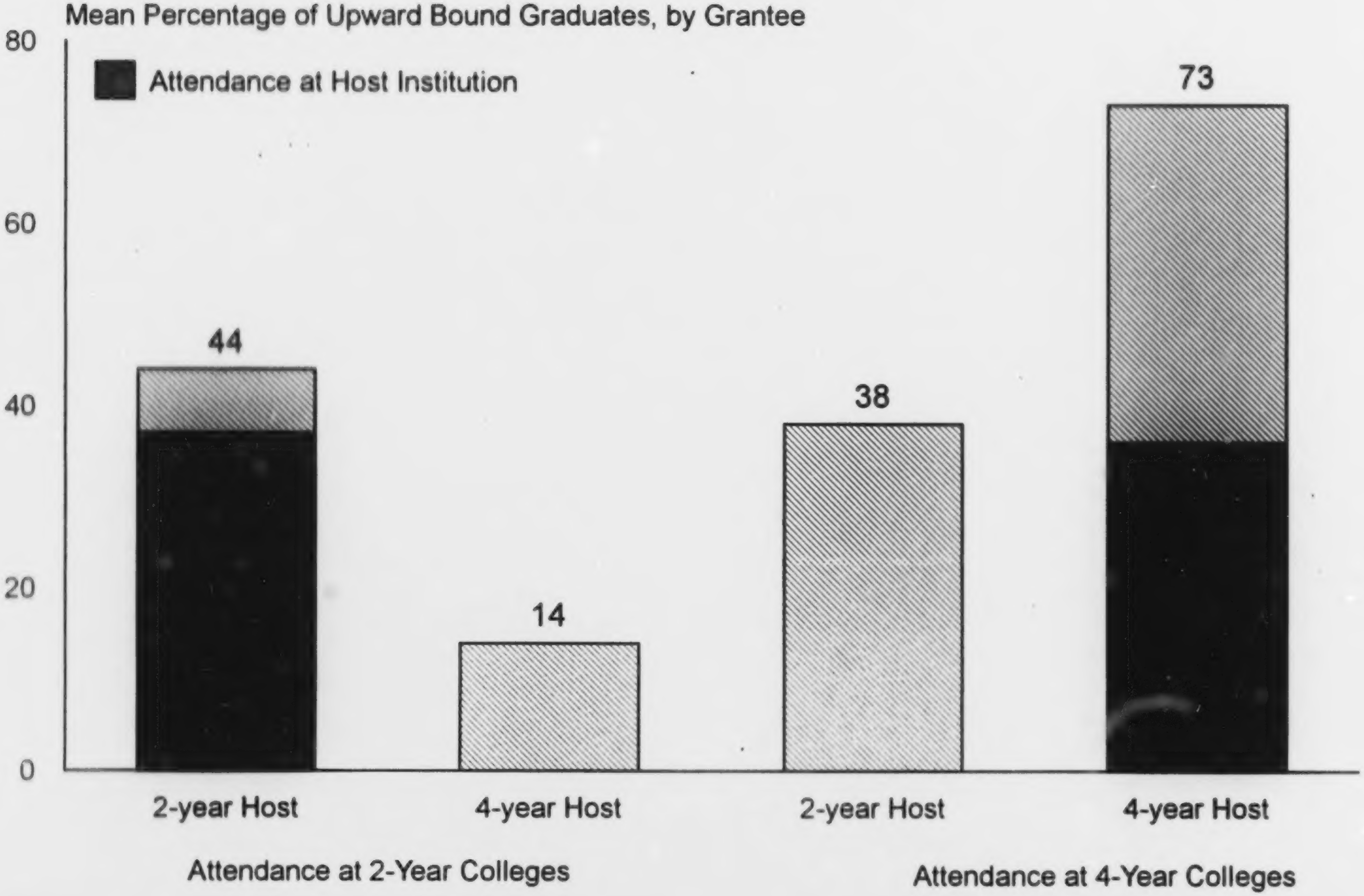

Table VII.5 presents a summary of relationships between project characteristics and the following outcomes from Upward Bound: dropout rates, two-year college attendance rates, four-year college attendance rates, overall college attendance rates, and percentage of graduates attending the host institution. For each outcome, the table shows the estimated differences between various types of projects, after controlling for other project characteristics. We performed three sets of multivariate analyses to test for significant relationships between project characteristics and particular outcomes: one using up to 179 projects in the grantee sample, and two others using up to 66 projects in the longitudinal impact study. (Use of the smaller sample made it possible to control for a wider variety of student characteristics using matched data from the target school and baseline surveys.)[8] For each outcome in Table VII.5, the first row of results was obtained using the larger sample, the second using the smaller sample without any additional variables, and the third using the smaller sample and additional explanatory variables. Estimated differences that were not statistically distinguishable from zero are not reported in the table. It is important to note that *a significant difference between two types of Upward Bound projects is not necessarily caused by the observed characteristic distinguishing the projects; there might be unobserved characteristics of Upward Bound programs or students that are responsible for the observed difference in outcomes.*

In the following sections we discuss three characteristics of Upward Bound projects: their host institution type, their size, and their ratio of full-time regular staff to students. Of all the observed characteristics of Upward Bound projects, only these three are associated with significant differences in multiple outcomes in both the sample of regular grantees and the sample of grantees in the impact study.

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[8] The analyses for the sample of up to 179 grantees controlled for each project's urban setting, host institution type, curriculum emphasis, work experience program, residential summer program, size, staffing, age, number of performance emphases, and interaction with parents and target schools, as well as the predominant race/ethnicity and socioeconomic status of participating students. The analyses on the projects in the impact study added information on two- and four-year college attendance rates of target school graduates, strictness of the target school, and the average Upward Bound participant's educational expectations, work experience, and discipline record. A more complete presentation of the results of these analyses is provided in the Appendix.

TABLE VII.5

DIFFERENCES IN MULTIPLE OUTCOMES FROM UPWARD BOUND, BY KEY PROJECT CHARACTERISTICS, AFTER HOLDING OTHER PROJECT CHARACTERISTICS CONSTANT

Project Characteristics	Outcome Variables				
	Dropout Rate	College Attendance Rates of Program Graduates (percent)			Graduates Attending Host Institution (percent)
		2-Year	4-Year	Overall	
Host Institution Type (two-year versus four-year host)					
Difference for all regular projects	8.5	29.1	-34.8	--	-11.1
Difference for projects in impact study	21.2	42.2	-46.2	--	-24.5
Difference for projects in impact study (controls added)	--	36.9	-46.1	-9.2	-21.2
Project Size (100+ students versus 61-99 students)					
Difference for all regular projects	--	--	6.9	4.6	--
Difference for projects in impact study	10.2	-6.9	17.8	10.9	--
Difference for projects in impact study (controls added)	--	-8.1	16.6	8.5	--
Staffing (One full-time regular staff person per 16 students, instead of per 28 students)					
Difference for all regular projects	--	-1.8	3.8	2.0	--
Difference for projects in impact study	--	-5.2	8.5	3.4	--
Difference for projects in impact study (controls added)	-3.0	-3.1	7.6	4.5	--

"--" = estimated difference is not significantly different from zero

1. Host Institution Type

Host institution type is associated with dramatic differences in reported outcomes. There is strong evidence that, other observable factors held constant, graduates of Upward Bound projects based at two-year host institutions are more likely to attend two-year colleges and less likely to attend four-year colleges than graduates of projects based at four-year host institutions. If we control for other project characteristics, the two-year college attendance rate for graduates of programs hosted by two-year institutions is 29 to 42 percentage points higher than the two-year college attendance rate for graduates of programs hosted by four-year institutions. Conversely, the four-year college attendance rate for graduates of programs hosted by two-year institutions is (after controlling for other characteristics) 35 to 46 percent points lower than the rate for graduates of Upward Bound at four-year institutions. Without controls for target school or student baseline characteristics, overall college attendance rates do not vary significantly by host institution type once other project characteristics are held constant. Once these controls are added, the overall college attendance rate is estimated to be 9 percentage points lower for projects at two-year host institutions.

The evidence that there is a strong relationship between host institution type and type of college attended is consistent with at least two hypotheses. One hypothesis is that projects hosted by four-year institutions do a better job preparing students for attendance at four-year colleges and universities, or at least expose students to a four-year college environment. This exposure encourages Upward Bound graduates to apply to four-year colleges and universities, possibly including the host institution. A rival hypothesis is that the association between host type and college attendance is due to unobserved characteristics of students in projects hosted by two-year institutions. These unobserved characteristics could include factors such as participants' levels of academic preparation or skills, which would explain the observed differences in college attendance patterns by host institution type.[9]

The suggestion that the students at certain types of projects may be, on average, less prepared or skilled than other Upward Bound participants is not a criticism of particular Upward Bound programs or students. "Preparation" and "skill" may reflect numerous circumstances beyond the control of the projects or individuals. Lower college attendance rates associated with certain types of projects do not by themselves indicate an inferior program, but may instead reflect the greater challenges projects face when they elect to work with a more disadvantaged population of students. It is entirely possible that the educational "value-added" of projects that reported dropout rates and low college attendance rates exceeds the value-added of other projects reporting low dropout rates and high college attendance rates. As the national evaluation of Upward Bound continues, we will be able to explore these questions once longitudinal data are available for a sample of Upward Bound participants and a randomly selected control group of non-Upward Bound students.

2. Project Size

Large Upward Bound projects report higher four-year overall college attendance rates than medium-sized Upward Bound projects, even after a variety of project and student characteristics are held constant. Compared to projects with between 61 and 99 students, Upward Bound projects with more than 100 students are estimated to have four-year college attendance rates that are 7 to 17 percentage points higher, and overall college attendance rates that are between 5 and 8 percentage points higher. At least two hypotheses may explain why larger projects appear to be more successful in sending graduates to colleges and especially to four-year colleges. Upward Bound projects may experience "increasing returns to scale";

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[9] A lower level of skill or motivation among the average student at projects hosted by two-year institutions might also explain why such projects, in the sample of all regular projects, are estimated to have dropout rates about 8 percentage points higher than those calculated for projects at four-year hosts, other things held equal.

larger projects may be able to accomplish more by offering a wider variety of programs and services than is feasible for smaller projects to offer. A rival hypothesis is that the more successful Upward Bound projects (as measured by college attendance rates) attract more students over time, and hence grow to be larger than Upward Bound projects with lower college attendance rates.

3. Staffing Ratios

Ratios of staff per student participant are associated with significant differences in project outcomes. We distinguished two types of staff: regular staff (including teachers, instructors, counselors, and administrators) and mentors or tutors. Each staffing ratio was calculated as the number of full-time equivalent staff per student for a project's academic year program.[10] Controlling for other observed project characteristics and for target school and student characteristics, we found that projects with more full-time regular staff per student reported significantly lower two-year college attendance rates, and significantly higher four-year and overall college attendance rates.

A reasonable explanation for the positive relationship between staffing, and overall and four-year college attendance rates is that projects with more staff per pupil can give students more personalized attention than can other Upward Bound projects. In at least some cases, this additional attention from staff appears to increase the likelihood of attending college in general, and four-year colleges in particular, with a somewhat lower probability of attending two-year colleges. The underlying estimates suggest that an increase in the size of the regular staff from one full-time person per 28 students, to one full-time person per 16 students,[11] is associated with the following:

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[10] The calculation of full-time equivalents was based on the cost reports for the 20 case-study sites, as documented in the Appendix. Including separate variables for full- and part-time staff did not alter the results.

[11] This change represents an increase in regular staffing from the 25th percentile value to the 75th percentile value for Upward Bound projects. (About one-quarter of Upward Bound projects report regular staffing ratios below one full-time person per 28 students; another one-quarter report regular staffing ratios above one full-time person per 16 students.)

- a two-year college attendance rate that is 2 to 5 percentage points lower than the two-year college attendance rates for otherwise identical projects; and
- a four-year college attendance rate that is 4 to 9 percentage points higher than the four-year college attendance rates for otherwise identical projects; and
- an overall college attendance rate that is 2 to 5 percentage points higher than the overall college attendance rate for otherwise identical projects.

Besides increasing four-year and overall college attendance rates of program graduates, large staff-to-student ratios may also reduce the dropout rate for Upward Bound participants. For projects in the impact study, the increase in staffing ratios described above is associated with a decrease in predicted dropout rates of 3 percentage points, after controls are added for the characteristics of target schools and of likely student participants.

4. Future Research

Longitudinal data on individual Upward Bound participants have the potential to further illuminate differences between students at different types of Upward Bound projects. Analyses of follow-up data could determine whether individual participants in certain Upward Bound projects are less likely to drop out and more likely to attend college than participants in other Upward Bound projects. Perhaps the greatest advantage of the longitudinal studies will be the capacity to control for pre-existing student characteristics through a random assignment design. That is, students in both the treatment and control groups should have had similar levels of academic motivation and college preparation before they entered Upward Bound, enabling researchers to attribute significant differences in outcomes to participation in the program.

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APPENDIX A

In this appendix, we briefly describe how the grantee survey sample was selected, how it was weighted, and how standard errors of sample estimates were calculated to reflect the sample design. We also provide a copy of the survey instrument.

A. SAMPLE DESIGN

For the grantee survey, we selected a nationally representative sample of Upward Bound projects. The "universe" for the grantee survey--the collection of projects targeted for study and eligible to be selected for the survey--consists of active regular projects. Veterans projects and math/science projects are not considered regular projects. During the period when the grantee survey sample was selected and the survey was conducted (roughly May 1992 through June 1993), there were 440 active regular Upward Bound projects. (Some projects funded in the 1989-92 grant cycle were defunded in the 1992-95 grant cycle and therefore eliminated from the grantee survey universe. Projects new funded in the 1992-95 grant cycle were also excluded from the universe.)

From the universe of 440 projects, we selected a sample of 244 projects using stratified simple random sampling: each project in the universe was assigned to a group of projects (a stratum) and a sample was drawn from each stratum. Sampling rates varied across strata, so some projects had a greater chance of being selected than other projects. Stratification with disproportionate sampling (unequal sampling rates) was used to ensure that enough projects were selected to support precise estimates for relatively small, but important analytic subgroups, such as large projects or projects hosted by two-year postsecondary institutions.

The 50 strata used to select the grantee survey sample are displayed in Table A.1. The table also shows, for each stratum, the number of projects in the universe, the number of projects selected for the sample, and the number of projects responding (at least partially) to the survey. Within each stratum, projects were selected using simple random sampling without replacement. Thus, although

TABLE A.1

DISTRIBUTION OF UPWARD BOUND PROJECTS: GRANTEE SURVEY

	Number of Projects		
		Sample	
Stratum	Universe	Selected	Respondents
Urban: Four-Year, Public			
Small			
African American*	14	9	9
Latino	4	2	2
Other	7	4	3
Medium			
Asian	5	2	2
Native American	2	1	1
Latino	9	2	2
Other	56	6	6
Large			
African American	25	19	17
Latino	6	4	4
White	2	2	2
Other	6	5	4
Urban: Four-Year, Private			
Small			
African American	8	5	5
Other	5	2	1
Medium			
Asian	4	2	2
African American	38	15	13
Latino	3	2	2
Other	5	2	2
Large			
Asian	2	1	1
African American	22	16	14
Other	3	2	2

TABLE A.1 (*continued*)

Stratum	Number of Projects		
		Sample	
	Universe	Selected	Respondents
Urban: Two-Year			
Small			
Native American	1	1	1
African American	9	7	4
Latino	3	2	2
Other	5	4	4
Medium			
Asian	2	1	1
African American	10	8	8
Other	4	3	3
Large	3	3	3
Rural: Four-year, Public			
Small			
White	6	3	3
Other	6	4	3
Medium			
Native American	7	3	3
Latino	4	1	1
Other	30	3	3
Large			
African American	5	3	2
Other	10	7	6
Rural: Four-year, Private			
Small	7	4	4
Medium	14	6	6
Large	4	3	3

TABLE A.1 (*continued*)

Stratum	Number of Projects		
		Sample	
	Universe	Selected	Respondents
Rural: Two-year			
Small			
African American	4	3	3
White	5	5	4
Other	6	4	4
Medium			
African American	5	3	3
White	8	7	6
Other	5	4	4
Large			
White	3	2	2
Other	3	2	2
Projects located outside the 50 states and the District of Columbia**	13	13	12
Projects not hosted by postsecondary institutions	17	17	16
New projects	14	14	13
Projects serving only students with physical disabilities	1	1	1
Total	440	244	224

*At least 50 percent of the students served by "African American projects" are classified as African American according to the 1990-1991 Upward Bound performance reports. Native American, Latino, and white projects are similarly defined. (Native American includes Alaskan Native.) For Asian projects, at least 25 percent of the students served are classified as Asian or Pacific Islander.

**Projects were assigned to the last four (certainty) strata hierarchically, with strata taking precedence in the order shown. Thus, for example, a new project that is not hosted by a postsecondary institution is assigned to the second of the four strata, assuming it is located within the 50 states and the District of Columbia.

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selection probabilities varied across strata, each project in a given stratum had the same chance of being selected. That chance equals the number of projects selected divided by the number of projects in the universe in that stratum.

As shown in Table A.1, the universe of 440 projects consists of 395 projects that are (1) located in the 50 states and the District of Columbia; (2) hosted by postsecondary educational institutions; (3) mature, having operated for at least three years by October 1992; and (4) not serving only students with physical disabilities. The other 45 projects in the universe do not meet one of these four criteria. Those projects were assigned to 1 of the 4 strata listed at the end of Table A.1 and were selected with certainty.

Each of the 395 projects meeting all four criteria listed above was assigned to 1 of 46 strata defined, in part, by cross-tabulating three stratifying variables:

1. Location of the host institution
2. Type and control of the host institution
3. Project size

The location variable has two categories: (1) urban and (2) rural. A project is classified as urban if the host institution is located in a Metropolitan Statistical Area (MSA), as defined by the U.S. Bureau of the Census. The type and control variable has three categories: (1) public, four-year; (2) private, four-year; and (3) two-year. Type and control was ascertained from the 1990-1991 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics file. The project size variable has three categories: (1) small (60 or fewer students), (2) medium (61 to 99 students), and (3) large (100 or more students). Enrollment figures were obtained from the 1990-1991 Upward Bound performance reports.

Although some strata are defined entirely in terms of the location, type and control, and project size variables, many strata are defined by also taking into account projects' racial/ethnic compositions. At least 25 percent of the students served by "Asian projects" are classified as Asian or Pacific Islander. For a Native American (including Alaskan Native), African American, Latino, or white project, at least 50 percent of the students served are classified as members of the specified racial/ethnic group. Data on race/ethnicity were obtained from Upward Bound performance reports.

When possible, projects were sampled proportionately by racial/ethnic composition within classifications based on the other three stratifying variables. Thus, any differences by racial/ethnic composition in the overall rates at which projects were sampled are due to disproportionate sampling by, mainly, size and type and control. Small projects, large projects, and projects hosted by two-year postsecondary institutions were oversampled to provide adequate sample sizes for subgroup analyses.

B. WEIGHTING

Each project responding to the grantee survey was assigned a sample weight. A project's weight indicates how many projects it represents. A project with a weight of four represents itself and three other projects that were not selected for the sample (or did not respond to the survey).

Weighting has three purposes. First, weighting ensures that the sample "weights up" to the universe, producing the correct total number of projects both within and across strata. Second, for purposes of estimation, weighting "undoes" the effects of disproportionate sampling so that two strata with the same number of projects in the universe are counted equally even if they have different numbers of projects in the sample. Third, weighting adjusts for nonresponse.

We constructed sample weights in two steps. In the first step, we set a project's weight equal to the inverse of its selection probability. According to Table A.1, large "other" projects at urban four-year public institutions had a selection probability of 5/6, (five out of six projects were selected) implying a weight of 1 divided by 5/6, or 6/5 = 1.2. If all five projects selected for the sample had responded to the survey, each would have received a weight of 1.2, and their weights would have summed to 5 × 1.2 = 6, the number of projects in the universe in that stratum. One of the five projects, however, did not respond to the survey and gets a weight of 0, like the project that was not selected. Then, the weights for the four respondents sum to only 4 × 1.2 = 4.8, and the stratum is underrepresented. In the second step of the weighting procedure, we correct for this problem by adjusting weights for nonresponse. To have the four respondents in our example "stand in" for the nonrespondent, we divide the weight that the nonrespondent would have received had it responded (1.2) into four equal pieces of 0.3 and add a piece to each respondent's weight from Step 1. Thus, each respondent gets an adjusted weight of 1.2 + 0.3 = 1.5, and the respondents' adjusted weights sum to 4 × 1.5 = 6, the number of projects in the universe in the stratum. Thus, the respondents represent themselves and two other projects: the project that was never selected and the nonrespondent. Although using a two-step weighting procedure makes explicit the adjustment for nonresponse, the nonresponse adjusted weights can be obtained in a single step by dividing the number of projects in the universe in a stratum by the number of respondents in that stratum. Respondents in the same stratum receive the same weight.

Weighting is a common way to adjust for nonresponse. Although we could have taken other approaches, we used weighting to adjust for nonresponse because it is simple and because nonresponse was low (about 8 percent). Moreover, fairly extensive analyses of nonresponse patterns revealed no observable characteristics that are closely associated with a project's being a nonrespondent. Our weighting adjustment for nonresponse, indeed, assumes that nonresponse is random within a stratum: all the projects in a stratum are equally likely to be selected for the sample and equally likely to respond to the survey if selected.

C. CALCULATING STANDARD ERRORS

Throughout this report, we present many estimates, such as percentages and means. These estimates are called "point" estimates because they are single values, as opposed to ranges of values. In Appendix C, we report standard errors for some of these point estimates. As its name implies, a standard error is an estimate of the error in a point estimate, that is, an expression of our uncertainty. Typically, standard errors are used to construct "interval" estimates or "confidence intervals" that give a range of possible values. A "95-percent" confidence interval extends from two standard errors below the point estimate to two standard errors above the point estimate. Thus, when we estimate that 64 percent of projects based at four-year schools have been in operation for more than 20 years and the standard error for this estimate is 5, the 95-percent confidence interval runs from 64 - (2 × 5) to 64 + (2 × 5), or from 54 to 74. One interpretation of this confidence interval is that if we repeated our sampling and estimation procedures 100 times (drawing a new random sample each time), about 95 percent, or 95 of the 100, confidence intervals that we construct will contain the true percentage of projects at four-year schools that have been in operation for more than 20 years. That true percentage is the percentage that would have been obtained if we had surveyed all 319 projects in the universe that are based at four-year schools, rather than a sample of 140 such projects. In our example, we are 95 percent "confident" that the true percentage of projects at four-year schools that have operated for more than 20 years lies between 54 and 74. Of course, the true percentage either does or does not lie in that range.

In Appendix C, we present "t-statistics," rather than confidence intervals, although they are closely related. Dividing a point estimate by its standard error gives a t-statistic. If that t-statistic is less than two in absolute value (that is, between -2 and 2), we conclude that the point estimate is not *significantly* different from zero, in other words, that the observed difference from zero may be due entirely to the element of chance introduced by sampling. Determining whether the t-statistic is less than two in absolute value is the same as determining whether the confidence interval includes zero. When the confidence interval includes zero, we are not confident that the true value is different from zero.

To estimate error and express our uncertainty accurately, standard errors must be calculated using methods that reflect how the sample was drawn. For the relatively simple sample design for the grantee survey (stratified simple random sampling), there are formulas for directly calculating appropriate standard errors for many of the statistics presented in this report. However, to obtain standard errors for some of the more complex statistics presented and to facilitate the analysis of a large amount of data, we used SUDAAN, a computer software package that uses the Taylor series linearization method to calculate standard errors. SUDAAN allows the user to specify how the sample was drawn.

D. THE QUESTIONNAIRE

The survey consisted of a mail questionnaire that was sent to the 244 Upward Bound project directors in 1992 (attached) and a response rate of 92 percent was achieved.

OMB No.: 1875-0089

Expires: September 30, 1995

HORIZONS

The National Study of Upward Bound

SURVEY OF UPWARD BOUND GRANTEES

U.S. Department of Education
Washington, DC

The United States Department of Education is concerned with protecting the privacy of individuals who participate in surveys. Your responses will be combined with those of other Upward Bound grantees, and the answers you give will never be identified as yours. This survey is authorized by law (20 U.S.C. 1221e.1). You may skip questions you do not want to answer, however, we hope you will answer as many as you can.

Conducted by:

Mathematica Policy Research, Inc.
Princeton, NJ

RETURN INSTRUCTIONS

When you have completed this questionnaire, please return it in the postage paid envelope to:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393

Attention: Ed Freeland

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PART A: PROJECT ENVIRONMENT

The first questions are about the environment in which this Upward Bound project operates and the schools from which students are recruited.

A1. Which of the following best describes the area in which this host institution is located?

MARK ONE

01 ☐ Rural
02 ☐ Suburban community
03 ☐ Small city
04 ☐ Medium-sized city
05 ☐ Large city or metropolitan area

A2. In what year did the Upward Bound project at this host institution first begin?

19 |__|__|
Year

A3. Has this Upward Bound project been in operation continually since it first began?

01 ☐ Yes
02 ☐ No
-1 ☐ Don't know

A4. Listed below are some advisory committees that Upward Bound projects may have. Please indicate for each whether this Upward Bound project has such a committee.

MARK ONE FOR EACH

	Yes	No
a. Community Resources Committee	01 ☐	02 ☐
b. Parent Advisory Committee	01 ☐	02 ☐
c. Student Advisory Committee	01 ☐	02 ☐
d. Other Committee *(Specify)*: ____________	01 ☐	02 ☐

A5. Do other precollegiate or college academic assistance programs for disadvantaged youth operate at this host institution?

01 ☐ Yes
02 ☐ No ➡ SKIP TO A7

A6. What other precollegiate or college academic assistance programs for disadvantaged youth operate at this host institution?

MARK ALL THAT APPLY

01 ☐ Talent Search
02 ☐ Student Support Services
03 ☐ Career Beginnings
04 ☐ Educational Opportunity Centers
05 ☐ Other federally funded precollegiate program
(Specify): ____________
06 ☐ Other precollegiate program sponsored by state or local government
(Specify): ____________
07 ☐ Other precollegiate program sponsored by host institution
(Specify): ____________
08 ☐ Other precollegiate program sponsored by private organization or individual
(Specify): ____________

A7. From how many target or feeder schools does this Upward Bound project draw students?

________ Number of Target/Feeder Schools

A8. How many of these schools have been associated with this Upward Bound project for:

	Number of Schools
a. Less than 1 year	______
b. 1 to 5 years	______
c. 6 to 10 years	______
d. More than 10 years	______
e. TOTAL (a through d) SHOULD BE EQUAL TO A7	☐

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PART B: PROJECT STAFF

The next questions about the Upward Bound project director and staff should be answered by the project director.

B1. Are you a former Upward Bound student?

01 ☐ Yes

02 ☐ No

B2. For how many years have you been working for Upward Bound, at this project or any other?

DO NOT INCLUDE TIME SPENT AS AN UPWARD BOUND PARTICIPANT.

________ Number of Years

B3. In what month and year did you become director of this Upward Bound project?

|__|__| 19 |__|__|
Month Year

B4. Are you a faculty member at the host institution?

MARK ONE

01 ☐ Yes ⇒ GO TO B5

02 ☐ No ⇒ SKIP TO B7

-4 ☐ Does Not Apply - No faculty status at host institution ⇒ SKIP TO B9

B5. What is your academic rank at the host institution?

MARK ONE

01 ☐ Instructor

02 ☐ Assistant Professor

03 ☐ Associate Professor

04 ☐ Professor

05 ☐ Other *(Specify)*: ____________________

____

B6. Do you have tenure at this institution?

MARK ONE

01 ☐ Yes

02 ☐ No

-4 ☐ Does Not Apply - No tenure system at host institution

B7. Do you have an administrative appointment other than Upward Bound at this institution?

01 ☐ Yes ⇒ GO TO B8

02 ☐ No ⇒ SKIP TO B9

B8. What is your administrative title?

MARK ONE

01 ☐ Department Head

02 ☐ Associate Department Head

03 ☐ Associate Dean

04 ☐ Assistant Dean

05 ☐ Other *(Specify)*: ____________________

____

B9. Do you serve on any advisory or planning committees (other than Upward Bound) at this host institution?

01 ☐ Yes ⇒ How many? |__|__| Committees

02 ☐ No

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B10. Do you serve as the director or administrator for any student programs other than Upward Bound at this host institution?

00 ☐ No

01 ☐ Yes – If Yes, what programs?

____

____

B11. What is the highest degree that you completed? Do not report honorary degrees.

MARK ONE

01 ☐ High school diploma

02 ☐ Associate's

03 ☐ Bachelor's

04 ☐ Master's

05 ☐ Doctorate

06 ☐ Other professional degree (e.g., JD, LLB, ThB, MD, DDS, etc.)

07 ☐ Other *(Specify)*: ____________________

B12. What is your race or ethnic background?

MARK ONE

01 ☐ Black (non-Hispanic)

02 ☐ White (non-Hispanic)

03 ☐ Asian or Pacific Islander

04 ☐ American Indian or Alaskan Native

05 ☐ Hispanic

06 ☐ Other *(Specify)*: ____________________

B13. What is your date of birth?

|__|__| |__|__| 19 |__|__|
Month Day Year

B14. What is your sex?

01 ☐ Male

02 ☐ Female

The next questions are about this Upward Bound project's staff.

B15. How many mentors and tutors did this Upward Bound project have during its 1992 summer and 1992-93 academic year programs?

ONLY COUNT STAFF MEMBERS WHO WORKED EXCLUSIVELY AS MENTORS OR TUTORS

	Number of Mentors and Tutors	
	Full-Time	Part-Time
a. 1992 Summer program	____	____
b. 1992-93 Academic year program	____	____

B16. From which group or groups does this Upward Bound project draw the majority of its tutors and mentors?

MARK ALL THAT APPLY

01 ☐ Adult professional workers (such as teachers, administrators, etc.)

02 ☐ Graduate students

03 ☐ Undergraduate students

04 ☐ Retired teachers

05 ☐ Other *(Specify)*: ____________________

____

-1 ☐ Don't know

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B17. **Thinking about the 1992 summer program, how many full-time and part-time staff did you have in each of the following categories?**

- DO NOT INCLUDE CLERICAL STAFF, MENTORS, TUTORS, OR RESIDENT AIDES.
- IF A STAFF PERSON HAD MORE THAN ONE ROLE, CLASSIFY IN MOST IMPORTANT ROLE.

	Full-Time	Part-Time
1. Teacher/Counselor		
2. Teacher/Instructor		
3. Counselor		
4. Administrator		
5. Other (Specify)		
6. TOTAL (1 through 5)		

Please answer B17a-B17d for these full-time and part-time 1992 summer staff members recorded in B17 above.

B17a. **What was the race or ethnic background of these full-time and part-time 1992 summer program staff?**

	Full-Time	Part-Time
1. Black (non-Hispanic)		
2. White (non-Hispanic)		
3. Asian or Pacific Islander ..		
4. American Indian or Alaskan Native		
5. Hispanic		
6. Other (Specify)		
7. TOTAL (1 through 6) SHOULD EQUAL TOTALS IN B17		

B17b. **How many of these full-time and part-time 1992 summer program staff were:**

	Full-Time	Part-Time
1. Male		
2. Female		
3. TOTAL (1 and 2) SHOULD EQUAL TOTALS IN B17		

B17c. **What was the educational background of these 1992 summer program full-time and part-time staff?**

	Full-Time	Part-Time
1. High school diploma		
2. Some college		
3. Associate's degree		
4. Bachelor's degree		
6. Beyond a bachelor's degree		
7. TOTAL (1 through 6) SHOULD EQUAL TOTALS IN B17		

B17d. **For how many summer programs have these full-time and part-time staff persons been with this Upward Bound project?**

	Full-Time	Part-Time
1. 1 summer		
2. 2-3 summers		
3. 4-5 summers		
4. 6-10 summers		
5. 10 summers or more		
6. TOTAL (1 through 5) SHOULD EQUAL TOTALS IN B17		

B18. **In general, how easy or difficult is it to recruit the following staff members for the summer program?**

	Easy	Neither Easy Nor Difficult	Difficult
a. Instructors	01 ☐	02 ☐	03 ☐
b. Counselors	01 ☐	02 ☐	03 ☐
c. Tutors	01 ☐	02 ☐	03 ☐
d. Mentors	01 ☐	02 ☐	03 ☐
e. Resident Aides ..	01 ☐	02 ☐	03 ☐

B19. **Thinking about the 1992-93 academic year program, how many full-time and part-time staff do you have in each of the following categories?**

- DO NOT INCLUDE CLERICAL STAFF, MENTORS, TUTORS, OR RESIDENT AIDES.
- IF A STAFF PERSON HAD MORE THAN ONE ROLE, CLASSIFY IN MOST IMPORTANT ROLE.

	Full-Time	Part-Time
1. Teacher/Counselor		
2. Teacher/Instructor		
3. Counselor		
4. Administrator		
5. Other (Specify) ________________		
6. TOTAL (1 through 5)	☐	☐

Please answer B19a-B19d for these full-time and part-time 1992-93 academic year program staff members recorded in B19 above.

B19a. **What is the race or ethnic background of these full-time and part-time staff?**

	Full-Time	Part-Time
1. Black (non-Hispanic)		
2. White (non-Hispanic)		
3. Asian or Pacific Islander		
4. American Indian or Alaskan Native		
5. Hispanic		
6. Other (Specify) ________________		
7. TOTAL (1 through 6) SHOULD EQUAL TOTALS IN B19	☐	☐

B19b. **How many of these full-time and part-time staff are:**

	Full-Time	Part-Time
1. Male		
2. Female		
3. TOTAL (1 and 2) SHOULD EQUAL TOTALS IN B19	☐	☐

B19c. **What is the educational background of these full-time and part-time staff?**

	Full-Time	Part-Time
1. High school diploma		
2. Some college		
3. Associate's degree		
4. Bachelor's degree		
6. Beyond a bachelor's degree		
7. TOTAL (1 through 6) SHOULD EQUAL TOTALS IN B19	☐	☐

B19d. **For how many academic year programs have these full-time and part-time staff persons been with this Upward Bound project?**

	Full-Time	Part-Time
1. 1 year		
2. 2-3 years		
3. 4-5 years		
4. 6-10 years		
5. 10 years or more		
6. TOTAL (1 through 5) SHOULD EQUAL TOTALS IN B19	☐	☐

B20. **In general, how easy or difficult is it to recruit the following staff members for the academic year program?**

	Easy	Neither Easy Nor Difficult	Difficult
a. Instructors	81 ☐	82 ☐	83 ☐
b. Counselors	81 ☐	82 ☐	83 ☐
c. Tutors	81 ☐	82 ☐	83 ☐
d. Mentors	81 ☐	82 ☐	83 ☐

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PART C: STUDENT RECRUITING AND SELECTION

The next questions are about recruiting and selecting students.

C1. Which of the following techniques are used to recruit students for this Upward Bound project.

MARK ALL THAT APPLY

01 ☐ Classroom presentations in schools

02 ☐ Assembly presentations in schools

03 ☐ Presentations/programs at community organizations

04 ☐ Newspaper stories or advertisements

05 ☐ Radio announcements, programs or advertisements

06 ☐ Incentives such as cash or movie tickets

07 ☐ Guidance counselor or other school staff recommendation

08 ☐ Teacher recommendation

09 ☐ Word of mouth, informal network

10 ☐ Other *(Specify)*: ____________________

____

____

C2. Which one statement below best describes this Upward Bound project's student recruitment strategy?

MARK ONE

01 ☐ Reach as many students as possible, then screen for those who meet eligibility

02 ☐ Target recruiting efforts at only those students most likely to meet this project's eligibility requirements

03 ☐ Recruit a number of eligible students that is close to the number of program openings

04 ☐ Other *(Specify)*: ____________________

C3. Approximately how many students applied for admission to this Upward Bound project for the 1992-93 academic year?

|__|__|__| Number of students

C4. **At the time of application, approximately what percentage of the students who applied for the 1992-93 academic year program were:**

	Percent (%)				
	None	1-25%	26-50%	51-75%	76-100%
a. Male	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
Female	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
b. 8th grade	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
9th grade	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
10th grade	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
11th grade	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
c. Black (non-Hispanic)	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
White (non-Hispanic)	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
Asian or Pacific Islander	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
American Indian or Alaskan Native	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
Hispanic	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
Other	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐
d. Physically or mentally disabled	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐

C5. **When reviewing the applicants for eligibility, which factors other than inability to meet poverty and first generation status would disqualify a student from further consideration for this Upward Bound project?**

MARK ALL THAT APPLY

01 ☐ Grade point average below a specified minimum

02 ☐ Grade point average above a specified maximum

03 ☐ English language proficiency below a specified minimum

04 ☐ Pregnancy or parenthood

05 ☐ A record of disciplinary actions

06 ☐ Low achievement or ability test scores

07 ☐ High achievement or ability test scores

08 ☐ A history of behavioral or emotional problems

09 ☐ A history of alcohol or drug abuse

10 ☐ Gang activity

11 ☐ No specific interest in college

12 ☐ Other *(Specify):* ____________________

13 ☐ NONE OF THE ABOVE

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C6. **Once eligibility has been determined, how important is each of the following for admitting students to participate in this Upward Bound project?**

MARK ONE FOR EACH

	Very Important	Somewhat Important	Somewhat Unimportant	Very Unimportant
a. Grades	01 ☐	02 ☐	03 ☐	04 ☐
b. Recommendations of school staff	01 ☐	02 ☐	03 ☐	04 ☐
c. Relative financial need	01 ☐	02 ☐	03 ☐	04 ☐
d. Leadership ability	01 ☐	02 ☐	03 ☐	04 ☐
e. Aspirations	01 ☐	02 ☐	03 ☐	04 ☐
f. Sibling in Upward Bound	01 ☐	02 ☐	03 ☐	04 ☐
g. Recommendations of other Upward Bound students	01 ☐	02 ☐	03 ☐	04 ☐
h. English proficiency	01 ☐	02 ☐	03 ☐	04 ☐
i. Enrollment in college preparatory courses	01 ☐	02 ☐	03 ☐	04 ☐
j. Gender balance of group	01 ☐	02 ☐	03 ☐	04 ☐
k. Racial/ethnic balance of group	01 ☐	02 ☐	03 ☐	04 ☐
l. Student from single parent household	01 ☐	02 ☐	03 ☐	04 ☐
m. Other *(Specify):* ______________________	01 ☐	02 ☐	03 ☐	04 ☐
______________________	01 ☐	02 ☐	03 ☐	04 ☐

C7. **When does this Upward Bound project admit new participants (not replacements for students who left before graduating)?**

MARK ONE

01 ☐ Summer only

02 ☐ Academic year only

03 ☐ Both summer and academic year

C8. **From which of these grades is it this Upward Bound project's policy to accept new participants (not replacements for students who left before graduating)?**

MARK ALL THAT APPLY

01 ☐ 8th grade

02 ☐ 9th grade

03 ☐ 10th grade

04 ☐ 11th grade

05 ☐ 12th grade

C9. **Once students are admitted, does their performance determine whether they can continue to participate in this Upward Bound project?**

01 ☐ Yes → GO TO C10 (PAGE 9)

02 ☐ No → SKIP TO C11 (PAGE 9)

C10. How important is each of the following for determining a student's continued participation in this Upward Bound program?

MARK ONE FOR EACH

	Very Important	Somewhat Important	Somewhat Unimportant	Very Unimportant
a. Upward Bound attendance record	01 ☐	02 ☐	03 ☐	04 ☐
b. School attendance record	01 ☐	02 ☐	03 ☐	04 ☐
c. Upward Bound academic performance	01 ☐	02 ☐	03 ☐	04 ☐
d. School academic performance	01 ☐	02 ☐	03 ☐	04 ☐
e. Discipline problems in school	01 ☐	02 ☐	03 ☐	04 ☐
f. Discipline problems in Upward Bound	01 ☐	02 ☐	03 ☐	04 ☐

C11. How often is a written evaluation made of each student's progress?

MARK ONE

01 ☐ Once a month
02 ☐ 2-3 times a year
03 ☐ Once a year
04 ☐ Only as needed
05 ☐ Other *(Specify)*: ______________________________
00 ☐ Never

C12. How often does this Upward Bound project routinely do each of the following activities?

MARK ONE FOR EACH ACTIVITY

	Never	Once a Year	2-6 Times a Year	More Than 6 Times a Year
a. Discuss each student's performance with target school teachers prior to developing written evaluation	00 ☐	01 ☐	02 ☐	03 ☐
b. Send copies of written evaluation to target school staff	00 ☐	01 ☐	02 ☐	03 ☐
c. Work with target school staff to develop specific plan for improving student performance	00 ☐	01 ☐	02 ☐	03 ☐
d. Use target school staff as tutors for students	00 ☐	01 ☐	02 ☐	03 ☐
e. Employ target school staff as instructors in Upward Bound courses	00 ☐	01 ☐	02 ☐	03 ☐
f. Conduct workshops for target school staff	00 ☐	01 ☐	02 ☐	03 ☐
g. Involve target school staff in developing Upward Bound courses and services	00 ☐	01 ☐	02 ☐	03 ☐

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C13. How often does this Upward Bound project routinely engage in the following activities with the parents of its students?

MARK ONE FOR EACH ACTIVITY

		Never	Once a Year	2-6 Times a Year	More Than 6 Times a Year
a.	Send parents written evaluations of student progress	80 ☐	81 ☐	82 ☐	83 ☐
b.	Discuss with parents written evaluations and plans for improving student performance	80 ☐	81 ☐	82 ☐	83 ☐
c.	Hold workshops for parents to help them plan for financing college	80 ☐	81 ☐	82 ☐	83 ☐
d.	Hold parent workshops on adolescent problems (e.g., drug and alcohol abuse prevention)	80 ☐	81 ☐	82 ☐	83 ☐
e.	Make home visits to parents of Upward Bound participants	80 ☐	81 ☐	82 ☐	83 ☐
f.	Require parents to contribute time to Upward Bound activities	80 ☐	81 ☐	82 ☐	83 ☐

PART D: PROJECT PARTICIPANTS

The next questions are about students who participated in this Upward Bound project.

D1. How many students participated in this Upward Bound project for at least some portion of the 1991-92 academic year or the 1992 non-bridge summer session?

|___|___|___| Number of Students

D1a. How many 12th graders who participated in this Upward Bound's 1991-92 academic year program received their high school diploma at the end of the 1991-92 academic year?

|___|___|___| Number Received High School Diploma

D1b. How many of the 1991-92 academic year and 1992 non-bridge summer session students returned to the program at the start of the 1992-93 academic year?

|___|___|___| Number Returned

D2. How long was the 1992 non-bridge summer program?

|___|___| Number of Weeks

D3. At which of the following locations did you offer Upward Bound services for the 1992 non-bridge summer program?

MARK ALL THAT APPLY

01 ☐ At feeder or target schools → How many? |___|___|

02 ☐ At the institution sponsoring this Upward Bound project

03 ☐ At a postsecondary institution other than the host institution

04 ☐ At neighborhood or community centers → How many? |___|___|

05 ☐ Other *(Specify):* ______________________________

____

D4. Was the 1992 non-bridge summer program residential or non-residential?

01 ☐ Residential

02 ☐ Non-residential

D5. Was a 1992 summer bridge program offered for students between their last year at high school and their first year of college?

01 ☐ Yes

00 ☐ No → SKIP TO D7 (PAGE 12)

D6. How long was the 1992 summer bridge program?

|___|___| Number of Weeks

D7. We would like some information about your 1992 summer and 1992-93 academic year program offerings.

Column A: Please indicate all services or courses offered during the 1992 non-bridge summer program.
Column B: Please indicate all services or courses offered during the 1992-93 academic year.
Column C: If offered: Please indicate if the course was offered to students in all grades or offered only to students in certain grades.

	A		B		C	
	1992 Non-Bridge Summer Program		1992-93 Academic Year		Offered to Students in All Grades	Offered Only to Students in Certain Grades
	YES	NO	YES	NO		
College Preparation/Skills						
1. Campus Visits	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
2. Adjusting to College Living	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
3. ACT/SAT Preparation	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
4. PSAT, PLAN, or PACT Preparation	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
5. Identify Sources of Financial Aid	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
6. Assistance - College Applications	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
7. Assistance - Financial Aid Applications	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
Career/Employment Assistance						
8. Site Visit to Employers or Job Shadowing	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
9. On Campus (employers or career reps)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
Project-Related Work Experience						
10. JTPA Job	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
11. Work-Study Job	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
12. Job Through Other Partnerships ______	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
Self-Awareness Seminars/Sessions						
13. Nutrition/Health/Substance Abuse	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
14. Other ______	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
Field Trips/Travel						
15. Week or More	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
16. Weekend	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
17. Day or Less	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
18. Cultural Awareness Seminars/Sessions	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
Counseling						
19. Personal	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
20. Family	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
21. Academic Advisement	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
22. Financial Aid	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
23. Career	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
24. Group Dynamics	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
Skill Development						
25. Tutoring	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐
26. Test Taking/Study Skills (to improve grades)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐	02 ☐

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D8. How long is the 1992-93 academic year program?

|__|__| Number of Weeks

D9. At which of the following locations were Upward Bound services offered during the 1992-93 academic year?

MARK ALL THAT APPLY

01 ☐ At feeder or target schools ➡ How many? |__|__|

02 ☐ At the institution sponsoring this Upward Bound Program

03 ☐ At a post-secondary institution other than the host institution

04 ☐ At neighborhood or community centers ➡ How many? |__|__|

05 ☐ Other *(Specify):* ________________

D10a. How many students were enrolled in this Upward Bound project's . . .

- ENTER "0" IF NONE OR DOES NOT APPLY

	Number of Students
a. 1992 non-bridge summer program	___
b. 1992 summer bridge program . .	___
c. 1992-93 academic year program	___

D10b. How many students enrolled in the following programs received stipends?

- ENTER "0" IF NONE OR DOES NOT APPLY

	Number of Students
a. 1992 non-bridge summer program	___
b. 1992 summer bridge program . .	___
c. 1992-93 academic year program	___

D11. How many of the students who were enrolled in the 1992 summer programs and the 1992-93 academic year program were:

	a. 1992 Summer Non-bridge Program Number	b. 1992 Summer Bridge Program Number	c. 1992-93 Academic Year Program Number
a. Male	___	___	___
Female	___	___	___
TOTALS SHOULD EQUAL D10a-c . .	___	___	___
b. 8th grade	___		___
9th grade	___		___
10th grade	___		___
11th grade	___		___
12th grade	___		___
TOTALS SHOULD EQUAL D10a-c . .	___		___
c. Black (non-Hispanic)	___	___	___
White (non-Hispanic)	___	___	___
Asian or Pacific Islander	___	___	___
American Indian or Alaskan Native . .	___	___	___
Hispanic	___	___	___
Other	___	___	___
TOTALS SHOULD EQUAL D10a-c . .	___	___	___
d. Physically or mentally disabled	___	___	___

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D12. How many students in the 1992-93 academic year program have parents who do not have a college degree?

|___|___|___| Number of Students

D13. How many students in the 1992-93 academic year program come from households with annual incomes that are:

	Number
a. At or below 150% of the poverty level	________
b. Above 150% of the poverty level	________

D14. How many of these students in the 1992-93 academic year program have parents who do not have a college degree AND come from households with annual incomes that are at or below 150% of the poverty level?

|___|___|___| Number of Students

D15. In which grades are students most likely to leave this Upward Bound project for reasons other than graduation?

MARK ALL THAT APPLY

01 ☐ 8th grade
02 ☐ 9th grade
03 ☐ 10th grade
04 ☐ 11th grade
05 ☐ 12th grade

D16. When during the year are students most likely to leave this Upward Bound project for reasons other than graduation?

MARK ALL THAT APPLY

01 ☐ Fall of academic year program
02 ☐ Spring of academic year program
03 ☐ Prior to summer program
04 ☐ During summer program
05 ☐ After summer program
06 ☐ No special time

D17. In general, how important is each of these factors for explaining why students leave this Upward Bound project for reasons other than graduation?

MARK ONE FOR EACH FACTOR

	Not a Factor	Minor Factor	Moderate Factor	Major Factor
a. Their family moved out of the area	00 ☐	01 ☐	02 ☐	03 ☐
b. The student was asked to leave by the program	00 ☐	01 ☐	02 ☐	03 ☐
c. To play sports or participate in other extracurricular activities	00 ☐	01 ☐	02 ☐	03 ☐
d. To take after-school or summer job	00 ☐	01 ☐	02 ☐	03 ☐
e. To assist with child care at home	00 ☐	01 ☐	02 ☐	03 ☐
f. To drop out of high school	00 ☐	01 ☐	02 ☐	03 ☐
g. To spend time with friends	00 ☐	01 ☐	02 ☐	03 ☐
h. Other reasons *(Specify)*:	00 ☐	01 ☐	02 ☐	03 ☐

____

:384.

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D18. For the 1992 non-bridge summer and 1992-93 academic year programs, please indicate in which subjects this Upward Bound project offered courses?

Column A: Indicate if a subject was offered in the 1992 non-bridge summer program.
Column B: Indicate if a subject was offered during the 1992-93 academic year program.
Column C: If offered: Indicate if this subject is part of a mandatory core curriculum that all students must take to complete the Upward Bound program.

	A 1992 Non-Bridge Summer Program Yes	 No	B 1992-93 Academic Year Yes	 No	C Mandatory Check If Yes
English/Language Arts					
a. Writing/Composition	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
b. Literature	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
c. Reading Comprehension and Vocabulary	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
d. Other *(Specify:* ________________)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
e. English as a Second Language	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
f. Foreign Language	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
Mathematics					
g. Pre-Algebra	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
h. Algebra I	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
i. Algebra II	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
j. Geometry	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
k. Pre-Calculus	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
l. Calculus	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
m. Other *(Specify:* ________________)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
Computers					
n. Programming	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
o. Applications/Software Use	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
p. Other *(Specify:* ________________)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
Science					
q. Physics	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
r. Biology	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
s. Chemistry	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
t. Earth Science	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
u. Other *(Specify:* ________________)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
Social Science/History					
v. History	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
w. Geography	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
x. Sociology	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
y. Psychology	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
z. Government/Civics	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
aa. Other *(Specify:* ________________)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
Elective/Non-Academic Courses					
bb. Performing Arts	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
cc. Art	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
dd. Journalism	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
ee. Speech/Public Speaking	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
ff. Physical Fitness	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
gg. Other *(Specify:* ________________)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐
hh. Other *(Specify:* ________________)	01 ☐	00 ☐	01 ☐	00 ☐	01 ☐

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D19. **How many students typically receive high school credit for at least one course sponsored by this Upward Bound project?.**

- INCLUDE ONLY CREDIT THAT CAN BE USED TO FULFILL GRADUATION REQUIREMENTS.

MARK ONE

00 ☐ None
01 ☐ Less than half
02 ☐ More than half, but not all
03 ☐ All

D20. **How many summer bridge students in this Upward Bound project typically earn college credit for courses taken as part of their Upward Bound experience?**

- INCLUDE COURSES NOT OFFERED BY UPWARD BOUND.

MARK ONE

00 ☐ None
01 ☐ Less than half
02 ☐ More than half, but not all
03 ☐ All

D21. **How often are these methods of instruction used in this Upward Bound project?**

Methods of Instruction	MARK ONE BOX FOR EACH METHOD OF INSTRUCTION 1992 Non-Bridge Summer			MARK ONE BOX FOR EACH METHOD OF INSTRUCTION 1992-93 Academic Year		
	Not at All	Sometimes	Often	Not at All	Sometimes	Often
a. Small group instruction:						
1. with students grouped by grade in school	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
2. with students grouped by proficiency level	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
3. with students of diverse proficiency to help each other	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
b. Lecture-style classes:						
1. led by non-college faculty	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
2. led by college faculty	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
c. Individualized, self-paced instruction for students	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
d. Computer-based instruction in academic subjects	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
e. Independent study projects involving research	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
f. Laboratory experiments with hands-on involvement	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
g. Assigning Upward Bound homework	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
h. Team teaching by instructors/faculty	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐

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D22. How often are the following approaches to subject content used in this Upward Bound project?

	1992 Non-Bridge Summer			1992-93 Academic Year		
	Not at All	Sometimes	Often	Not at All	Sometimes	Often
a. Using cross-disciplinary themes to link classes in different subjects	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
b. Committing large blocks of time for studying a specific theme or subject	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
c. Working on homework assigned by the target school	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
d. Instructors teach from an established class syllabus	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
e. Instructors develop their own class syllabus	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐

D23. Indicate the degree of emphasis this Upward Bound project gives to the academic instruction provided in subject matter courses.

	1992 Non-Bridge Summer			1992-93 Academic Year		
	No Emphasis	Some Emphasis	Major Emphasis	No Emphasis	Some Emphasis	Major Emphasis
a. Instruction that parallels what students are learning in their regular school courses	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
b. Instruction that concentrates on fundamental concepts and skills that were taught in earlier grades	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
c. Instruction in concepts and material that goes beyond what students are exposed to in their regular school classes	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐
d. Other *(Specify:* ______________________ ______________________	00 ☐	01 ☐	02 ☐	00 ☐	01 ☐	02 ☐

D24. During the 1992-1993 academic year, how much contact did Upward Bound students have with the following Upward Bound staff?

	Daily	2-3 Times Per Week	Once a Week	Once Every 2-3 Weeks	Monthly
a. Director/assistant director	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
b. Counselors	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
c. Instructors	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
d. Tutors	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
e. Mentors	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐

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PART E: INNOVATION AND CHANGE

The next questions are about ways in which this Upward Bound project may have changed over the past 3 years.

E1. Has your Upward Bound project operated for 3 years or more?

01 ☐ Yes

02 ☐ No → SKIP TO E8 (PAGE 19)

E2. Compared to 3 years ago, would you say that the Upward Bound students currently enrolled are younger, older, or about the same age?

MARK ONE

01 ☐ Younger

02 ☐ Older

03 ☐ About the same age

E3. Would you say they have more or fewer academic deficiencies?

MARK ONE

01 ☐ More deficiencies

02 ☐ Fewer deficiencies

03 ☐ About the same

E4. Would you say that they have lower or higher expectations for completing college?

MARK ONE

01 ☐ Lower expectations

02 ☐ Higher expectations

03 ☐ About the same

E5. Would you say there is more or less parental involvement?

MARK ONE

01 ☐ More parental involvement

02 ☐ Less parental involvement

03 ☐ About the same

E6. Compared to 3 years ago, would you say this Upward Bound project now places more emphasis, less emphasis, or about the same emphasis on:

MARK ONE FOR EACH

	More Emphasis	Less Emphasis	About the Same
a. Academic subjects	01 ☐	02 ☐	03 ☐
b. Reasoning, writing, and study skills	01 ☐	02 ☐	03 ☐
c. Financial planning for college	01 ☐	02 ☐	03 ☐
d. Knowledge of financial aid sources	01 ☐	02 ☐	03 ☐
e. Building self-esteem and self-confidence	01 ☐	02 ☐	03 ☐
f. Individualized instruction	01 ☐	02 ☐	03 ☐
g. Assistance through tutoring	01 ☐	02 ☐	03 ☐
h. Time spent with mentors and role models	01 ☐	02 ☐	03 ☐
i. Contacts with parents	01 ☐	02 ☐	03 ☐

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E7. Compared to 3 years ago, would you say there is more, less, or about the same level of student participation in the summer bridge program?

MARK ONE

01 ☐ More participation
02 ☐ Less participation
03 ☐ About the same
-1 ☐ Does not apply

E8. Over the past 3 years, what percent of all your Upward Bound graduates have...

a. Attended a 4 year college ..... ________ %
b. Attended a 2 year community or junior college .... ________ %
c. Attended another type of post-secondary institution (e.g., Vocational, Technical, or Proprietary Trade School) ..... ________ %
d. Joined the military .... ________ %
e. Not enrolled in college or joined the military .... ________ %
f. Don't know .... ________ %
100%

E9. In a typical year, indicate the number of graduates from this program who enroll in the host institution.

-1 ☐ Does not apply - host institution is not a postsecondary institution

MARK ONE

01 ☐ More than 10
02 ☐ 3-10
03 ☐ 1 or 2
04 ☐ None

E10. Does this project currently have a system for tracking Upward Bound students after they complete the program?

01 ☐ Yes → GO TO E11
02 ☐ No → SKIP TO E12

E11. How long does this project keep track of students once they have completed the program?

MARK ONE

01 ☐ Less than 1 year
02 ☐ 1 year
03 ☐ 2 years
04 ☐ 3 years
05 ☐ More than 3 years

E12. If necessary, does this Upward Bound project provide special services for students with mental or physical disabilities?

01 ☐ Yes → GO TO E13
02 ☐ No → SKIP TO E14 (PAGE 20)

E13. Which services are provided?

MARK ALL THAT APPLY

01 ☐ Transportation
02 ☐ Specialized instruction
03 ☐ Assistive devices/educational technology
04 ☐ Other *(Specify)*: ____________________

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E14. Based on your experience, how serious an obstacle to completing college is each of the following for your Upward Bound participants?

MARK ONE FOR EACH

	Not Serious	Somewhat Serious	Serious	Very Serious
a. Deficiencies in study skills	01 ☐	02 ☐	03 ☐	04 ☐
b. Deficiencies in math and science	01 ☐	02 ☐	03 ☐	04 ☐
c. Deficiencies in writing skills	01 ☐	02 ☐	03 ☐	04 ☐
d. Deficiencies in communication skills	01 ☐	02 ☐	03 ☐	04 ☐
e. Inability to adjust to college life	01 ☐	02 ☐	03 ☐	04 ☐
f. Lack of long term career goals	01 ☐	02 ☐	03 ☐	04 ☐
g. Inadequate financial resources	01 ☐	02 ☐	03 ☐	04 ☐
h. Lack of support from family or spouse	01 ☐	02 ☐	03 ☐	04 ☐
i. Difficulties of living away from home	01 ☐	02 ☐	03 ☐	04 ☐
j. Insufficient academic planning	01 ☐	02 ☐	03 ☐	04 ☐
k. Other *(Specify)*: ____________________	01 ☐	02 ☐	03 ☐	04 ☐

E15. Of the obstacles listed above, which would you say are the two most serious obstacles Upward Bound participants face when completing college?

Please indicate the letter corresponding to the item from the list above.

a. |___| Most Serious Obstacle b. |___| Second Most Serious Obstacle

E16. How important is each of the following as a program goal for students in your Upward Bound project?

MARK ONE FOR EACH

	Very Important	Somewhat Important	Somewhat Unimportant	Very Unimportant
a. Academic improvement	01 ☐	02 ☐	03 ☐	04 ☐
b. Access to financial aid	01 ☐	02 ☐	03 ☐	04 ☐
c. Exposure to college	01 ☐	02 ☐	03 ☐	04 ☐
d. Exposure to careers	01 ☐	02 ☐	03 ☐	04 ☐
e. Employment skills	01 ☐	02 ☐	03 ☐	04 ☐
f. Personal skills (goal orientation, ability to adapt to new settings)	01 ☐	02 ☐	03 ☐	04 ☐
g. Peer group support	01 ☐	02 ☐	03 ☐	04 ☐
h. Interpersonal skills	01 ☐	02 ☐	03 ☐	04 ☐
i. Communication skills	01 ☐	02 ☐	03 ☐	04 ☐
j. Other *(Specify)*: ____________________	01 ☐	02 ☐	03 ☐	04 ☐
k. ____________________	01 ☐	02 ☐	03 ☐	04 ☐

E17. Of the program goals listed above, which are the two most important for students at this Upward Bound project?

Please indicate the letter corresponding to the item from the list above.

a. |___| Most Important Goal b. |___| Second Most Important Goal

E18. The last question is about outside sources of financial support for this Upward Bound project. Please indicate the dollar amount that will be spent from any of these sources for Upward Bound activities between 9/1/92 and 8/31/93. Do not include sources that only provide in-kind contributions.

- FOR EACH "YES", PLEASE INDICATE THE AMOUNT THAT WILL BE SPENT BETWEEN 9/1/92 AND 8/31/93.

4 ☐ CHECK HERE IF NO OTHER SOURCES OF MONETARY SUPPORT ⇒ TURN PAGE FOR AN OPPORTUNITY TO COMMENT.

	MARK YES OR NO FOR EACH		AMOUNT TO BE SPENT				
Sources	Yes	No	$1- $999	$1,000- $9,999	$10,000- $24,999	$25,000- $50,000	More Than $50,000
USDA Free or Reduced Price Breakfast/Lunch program . . .	01 ☐	00 ☐	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
Other Non-Upward Bound Federal Funds *(Specify)*: . . .	01 ☐	00 ☐					
a. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
b. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
Foundation/Philanthropic Grant *(Specify)*:	01 ☐	00 ☐					
c. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
d. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
State/Local Government Grant *(Specify)*:	01 ☐	00 ☐					
e. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
f. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
Corporate Contributions *(Specify)*:	01 ☐	00 ☐					
g. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
h. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
Other Sources *(Specify)*: . . .	01 ☐	00 ☐					
i. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐
j. ____________	. . . .	. . . .	01 ☐	02 ☐	03 ☐	04 ☐	05 ☐

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PART F: COMMENTS

Questionnaires do not always give respondents a chance to express their thoughts or opinions in their own words. Please use this space to tell us about issues related to your program, or to Upward Bound in general, that you feel are important, and have not been adequately discussed in this questionnaire.

RETURN INSTRUCTIONS

Thank you for your time and cooperation in completing this questionnaire. When you have completed this questionnaire, please return it in the postage paid envelope to:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393

Attention: Ed Freeland

APPENDIX B

TABLE B.1

SUMMARY STATISTICS: COMPARISON OF ANALYSIS SAMPLE AND FULL SAMPLE

Variable	Analysis Sample	Full Sample
Students served in 1992 non-bridge summer component (project averages)		
Male	40	41
Female	60	59
8th grade	1	2
9th grade	16	17
10th grade	31	31
11th grade	32	32
12th grade	20	19
African American	52	51
White	23	22
Latino	13	16
Asian	4	4
Native American	7	7
Other	1	0
Years in operation		
Over 20	54	50
6-20	32	33
Fewer than 6	14	17
Length of non-bridge summer component		
6 weeks	86	85
Summer bridge component	86	85
Length of summer bridge component		
5-7 weeks	73	73

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Location of non-bridge summer services		
Target schools	16	15
Sponsoring institution	97	97
Residential program	87	84
Length of academic year component		
More than 25 weeks	75	76
Location of academic year services		
Target schools	65	66
Sponsoring institution	92	92
Average number of target schools	10	9
Longevity of target school relationships		
>75% more than 10 years	53	51
Most serious obstacle to college access		
Inadequate financial resources	47	47
Insufficient academic preparation	33	33
Personal problems	13	14
Most important program goal		
Academic improvement	79	79
Second most important program goal		
Access to financial aid	30	32
Personal skills development	25	24
Exposure to college	20	19

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Major instructional emphasis - summer		
Support	55	55
Remediation	23	23
Enrichment	69	69
Major instructional emphasis - academic year		
Support	64	65
Remdiation	18	19
Enrichment	44	46
Academic offerings (either component)		
Writing	100	99
Literature	83	84
Reading	98	97
Other English	13	13
ESL	11	15
Foreign language	38	37
Pre-algebra	82	82
Algebra I	96	96
Algebra II	95	95
Geometry	95	95
Pre-calculus	80	79
Calculus	58	56
Other math	24	24
Programming	47	47
Software use	79	79
Other computer	6	6

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Physics	63	63
Biology	89	89
Chemistry	81	81
Earth science	66	66
Other science	19	18
History	47	48
Geography	24	25
Sociology	17	18
Psychology	15	15
Government	40	39
Other social science	13	13
Performing arts	53	54
Art	53	55
Journalism	52	51
Speech	59	59
Physical education	69	69
Other non-academic courses	26	26
Other	1	1
Academic requirements (either component)		
Writing	91	91
Literature	63	65
Reading	80	79
Other English	9	9
ESL	6	8
Foreign language	16	16

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Pre-algebra	63	63
Algebra I	79	78
Algebra II	76	75
Geometry	74	74
Pre-calculus	49	49
Calculus	36	33
Other math	12	12
Programming	18	18
Software use	41	41
Other computer	3	3
Physics	42	41
Biology	67	66
Chemistry	57	57
Earth science	42	42
Other science	10	10
History	27	26
Geography	14	14
Sociology	9	8
Psychology	6	5
Government	19	18
Other social science	6	5
Performing arts	15	15
Art	12	12
Journalism	12	11
Speech	25	25

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Physical education	35	34
Other non-academic courses	16	16
Other	1	1
Support services (either session)		
Help identifying sources of financial aid	100	99
Assistance with financial aid applications	100	99
Financial aid counseling	99	99
JTPA placements	42	40
Work study placements	13	13
Other work experience	16	17
Site visits to employers	59	60
On-campus meetings with employers/career reps	78	78
Career counseling	100	100
Visits to college campuses	98	98
Courses in adjusting to college living	92	92
ACT/SAT preparation	97	97
PSAT/PLAN/PACT preparation	73	71
Assistance with college applications	99	99
Academic counseling	100	100
Tutoring	97	98
Study skills development	97	97
Nutrition/health/substance abuse seminars	93	93
Other self-awareness seminars	31	30
Personal counseling	100	100
Family counseling	77	78

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Group dynamics	89	90
Cultural awareness seminars	100	99
Trips of a week or more	35	36
Weekend trips	82	81
Trips of a day or less	96	96
Methods of instruction used frequently - summer		
Small group (by grade)	45	45
Small group (by proficiency)	57	56
Small group (mixed proficiency)	37	37
Lecture (non-college faculty)	57	58
Lecture (college faculty)	11	12
Individualized instruction	30	33
Computer-based instruction	14	14
Independent study	22	22
Lab experiments	48	48
Assign UB homework	76	76
Team teaching	28	28
Methods of instruction used frequently - academic year		
Small group (by grade)	37	38
Small group (by proficiency)	33	34
Small group (mixed proficiency)	32	32
Lecture (non-college faculty)	45	47
Lecture (college faculty)	8	9
Individualized instruction	28	31
Computer-based instruction	12	12

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Independent study	10	10
Lab experiments	13	12
Assign UB homework	30	31
Team teaching	17	18
Approaches to subject content used frequently - summer		
Using cross-disciplinary themes	33	34
Committing time to a specific theme or subject	46	45
Working on target school homework	13	14
Teaching from established syllabus	48	47
Teaching from instructor's own syllabus	77	78
Approaches to subject content used frequently - academic year		
Using cross-disciplinary themes	16	17
Committing time to a specific theme or subject	31	30
Working on target school homework	59	59
Teaching from established syllabus	30	30
Teaching from instructor's own syllabus	51	54
Parental involvement		
Send written evaluations at least once a year	81	82
Discuss evaluations and plans at least once a year	90	90
Hold financing workshops at least once a year	87	87
Hold workshops on adolescent problems at least once a year	55	56
Make home visits to parents at least once a year	73	74
Require parents to contribute time at least once a year	56	57

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Target school staff involvement		
Discuss performance with staff before writing evaluations at least once a year	61	61
Send staff written evaluations at least once a year	56	56
Work with staff to develop plans for improvement at least once a year	80	80
Use staff as tutors at least once a year	54	55
Hire staff as instructors at least once a year	90	87
Hire staff as instructors more than once a year	56	
Conduct workshops at least once a year	64	63
Involve staff in developing courses and services at least once a year	70	70
Academic year staff (full-time)		
African American	49	47
White	35	34
Asian	2	2
Native American	3	4
Latino	10	12
Other	0	0
Female	63	64
Male	37	36
Bachelor's degree	31	31
Higher degree	66	66
Tenure of one year or less	21	22
2-5 years tenure	46	46
6-10 years tenure	15	15
More than 10 years tenure	16	16

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Academic year staff (part-time)		
African American	41	39
White	43	43
Asian	3	3
Native American	3	3
Latino	7	10
Other	1	1
Female	61	61
Male	39	39
Bachelor's degree	34	35
Higher degree	59	58
Tenure of one year or less	30	32
2-5 years tenure	43	43
6-10 years tenure	15	15
More than 10 years tenure	10	10
Summer staff (full-time)		
African American	46	44
White	40	40
Asian	3	3
Native American	3	3
Latino	8	11
Other	0	0
Female	58	59
Male	41	40
Bachelor's degree	31	31

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Higher degree	61	61
Tenure of one year or less	27	27
2-5 years tenure	45	46
6-10 years tenure	13	13
More than 10 years tenure	15	14
Academic year staff (part-time)		
African American	40	39
White	47	46
Asian	3	3
Native American	2	2
Latino	8	11
Other	0	0
Female	55	55
Male	44	44
Bachelor's degree	35	35
Higher degree	54	54
Tenure of one year or less	36	37
2-5 years tenure	44	44
6-10 years tenure	12	12
More than 10 years tenure	6	6
Director characteristics		
Male	44	43
Female	56	57
African American	52	51
White	30	30

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Asian	1	1
Native American	4	4
Latino	12	14
Bachelor's degree	20	20
Higher degree	80	79
Over 15 years experience with UB	29	27
6-15 years experience with UB	34	36
Fewer than 6 years experience with UB	37	37
Grades admitted		
8th	24	24
9th	82	82
10th	91	89
11th	52	52
12th	2	2
Recruiting techniques		
Classroom presentations in schools	79	80
Assembly presentations in schools	74	73
Presentation to community organizations	63	63
Newspaper stories or advertisements	62	62
Radio announcements	39	39
Incentives such as cash or movie tickets	4	4
Guidance counselor or other school staff recommendations	100	99
Teacher recommendations	98	96
Word of mouth, informal network	97	97

TABLE B.1 (*continued*)

Variable	Analysis Sample	Full Sample
Recruitment strategies		
Reach as many as possible, screen later	62	61
Disqualification factors (grouped)		
High GPA or achievement test scores	28	30
Low GPA or achievement test scores	37	39
Behavioral problems (history of substance abuse, disciplinary actions, gang activity, or behavioral or emotional problems)	62	61
No specific interest in college	47	45
Very important admission criteria		
Grades	30	32
Staff recommendations	50	50
Relative financial need	37	40
Leadership ability	6	6
Aspirations	47	47
Sibling in Upward Bound	12	12
Recommendations of Upward Bound students	7	8
English proficiency	5	6
Enrollment in college preparatory courses	14	15
Gender balance	16	15
Racial/ethnic balance	18	17
Student from single-parent household	7	8

APPENDIX C

SUPPORTING DOCUMENTATION: CHAPTER II

TABLE C.2A
SUPPORTING DOCUMENTATION: CHAPTER II
LOGITS AND REGRESSIONS

	Contact with Director/ Assistant Director (logit)			Contact with Counselors (logit)			Contact with Instructors (logit)			Contact with Tutors (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.99	0.49	2.02	0.34	0.45	0.74	2.00	0.36	5.49	0.01	0.44	0.03
Location												
Rural	-0.88	0.35	-2.48	-0.04	0.34	-0.11	-0.17	0.40	-0.42	-0.40	0.35	-1.15
Host Type												
2-year	-0.82	0.34	-2.44	0.30	0.34	0.89	-0.26	0.38	-0.69	0.02	0.36	0.06
Size												
Small	-0.45	0.39	-1.16	-0.73	0.34	-2.18	-1.16	0.38	-3.03	-0.05	0.37	-0.13
Large	-0.19	0.55	-0.34	-0.49	0.46	-1.05	0.21	0.40	0.54	-0.15	0.43	-0.34
Race/Ethnicity												
Asian	-0.71	0.56	-1.25	1.09	0.79	1.38	-0.90	0.63	-1.43	0.51	0.58	0.89
Native America	-6.87	0.31	-21.92	0.29	0.68	0.42	-0.10	0.44	-0.22	0.24	0.78	0.31
Latino	0.12	0.40	0.30	-0.72	0.41	-1.74	-1.14	0.45	-2.55	-0.09	0.49	-0.18
White	-2.28	0.49	-4.63	-1.18	0.58	-2.03	-2.12	0.54	-3.91	-1.11	0.40	-2.81
Diverse	-1.17	0.56	-2.08	1.04	0.65	1.61	-0.43	0.71	-0.61	-0.92	0.55	-1.66
Yrs In Operation												
6-20	0.82	0.46	1.77	-0.40	0.48	-0.84	-0.20	0.46	-0.44	-0.22	0.41	-0.53
2-5	1.18	0.46	2.59	-0.38	0.46	-0.83	0.40	0.58	0.68	1.25	0.47	2.65
S_waite Adj DF		7.42			7.13			9.78			8.89	
S_waite F-stat		72.59			7.91			15.28			14.44	
Sample Size		181			173			151			177	
Page #		18			18			18			18	

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	Contact with Mentors (logit)			Number of Affiliated Target Schools (logit)			Two Or More Alternative Programs at Host Institution (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-1.59	0.38	-4.15	9.87	1.32	7.49	0.59	0.45	1.31
Location									
Rural	0.60	0.42	1.42	-0.18	0.86	-0.20	0.18	0.33	0.54
Host Type									
2-year	-1.11	0.49	-2.27	-0.43	0.53	-0.80	-0.26	0.32	-0.83
Size									
Small	0.74	0.49	1.50	-2.54	0.62	-4.13	-1.55	0.41	-3.77
Large	0.62	0.47	1.30	1.98	1.14	1.74	0.90	0.44	2.06
Race/Ethnicity									
Asian	-0.57	0.75	-0.75	-0.85	1.89	-0.45	0.28	0.81	0.35
Native America	0.13	0.84	0.16	2.39	1.06	2.25	0.12	0.75	0.16
Latino	0.71	0.63	1.12	1.16	0.99	1.17	-0.83	0.40	-2.06
White	0.62	0.56	1.11	2.49	0.90	2.78	-1.26	0.50	-2.52
Diverse	-0.64	0.91	-0.70	4.77	1.72	2.77	0.37	0.41	0.91
Yrs In Operation									
6-20	1.28	0.55	2.32	-1.81	1.03	-1.75	0.19	0.46	0.40
2-5	2.15	0.61	3.50	-3.63	0.93	-3.90	0.77	0.59	1.30
S_waite Adj DF		7.23			6.05			7.15	
S_waite F-stat		10.44			6.97			6.18	
Sample Size		87			182			182	
Page #		18			20			24	

	$10,000+ USDA Funding (logit)			$10,000+ Non-UB Federal Funding (logit)			$10,000+ Foundation Funding (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-2.54	0.53	-4.79	-4.17	0.97	-4.31	-1.58	1.05	-1.50
Location									
Rural	-1.33	0.65	-2.05	0.78	0.81	0.96	-6.53	0.96	-6.77
Host Type									
2-year	-7.93	0.48	-16.68	-1.82	0.85	-2.15	-4.83	1.04	-4.63
Size									
Small	-0.97	1.03	-0.95	-0.72	0.86	-0.84	-5.81	1.04	-5.56
Large	2.18	0.53	4.08	1.79	0.77	2.33	-1.79	1.22	-1.46
Race/Ethnicity									
Asian	-7.14	0.45	-15.71	1.32	0.82	1.61	-7.50	1.06	-7.09
Native America	-7.06	0.52	-13.66	-5.36	0.73	-7.37	-2.13	0.17	-12.56
Latino	1.34	0.71	1.88	1.14	0.85	1.34	-6.84	0.99	-6.91
White	0.32	0.54	0.60	0.46	0.70	0.66	-5.78	0.84	-6.86
Diverse	0.31	1.12	0.28	-0.36	1.25	-0.29	-7.85	0.98	-7.99
Yrs In Operation									
6-20	0.41	0.58	0.71	1.30	0.68	1.91	-7.89	1.02	-7.74
2-5	-6.63	0.67	-9.96	0.28	0.89	0.31	-6.10	1.02	-5.97
S_waite Adj DF		7.99			7.37			4.09	
S_waite F-stat		234.08			108.90			16.59	
Sample Size		181			182			182	
Page #		28			28			28	

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	$10,000+ State/Local Funding (logit)			$10,000+ Corporate Funding (logit)			$10,000+ Other Funding (logit)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	-4.21	1.47	-2.87	-1.70	1.11	-1.54	-2.06	0.42	-4.87
Location									
Rural	-9.32	0.91	-10.27	-2.50	0.76	-3.30	0.44	0.61	0.72
Host Type									
2-year	-0.38	0.77	-0.50	-0.94	0.78	-1.22	0.14	0.71	0.19
Size									
Small	-6.22	0.64	-9.72	-8.64	0.68	-12.70	-7.61	0.38	-19.82
Large	2.06	1.25	1.64	-1.72	1.28	-1.34	1.06	0.56	1.89
Race/Ethnicity									
Asian	-6.41	0.85	-7.54	-8.92	0.60	-14.83	1.66	0.53	3.16
Native America	-5.08	0.76	-6.72	2.37	0.72	3.31	-8.49	0.57	-14.79
Latino	1.34	0.86	1.56	-9.18	0.65	-14.21	-0.23	0.62	-0.37
White	-5.80	0.34	-17.08	-6.61	0.66	-10.06	-8.12	0.53	-15.37
Diverse	3.25	1.13	2.87	-8.13	0.76	-10.68	-1.55	1.13	-1.37
Yrs In Operation									
6-20	0.55	1.05	0.52	-1.70	1.33	-1.28	-0.76	0.49	-1.55
2-5	-6.54	1.12	-5.86	1.64	1.12	1.46	-0.38	0.65	-0.58
S_waite Adj DF		4.23			4.56			7.53	
S_waite F-stat		118.95			17.48			70.31	
Sample Size		178			182			182	
Page #		28			28			28	

TABLE C.2B

SUPPORTING DOCUMENTATION: CHAPTER II
CHI-SQUARE TESTS

Subgroup	Outcome/Characteristic		Outcome/Characteristic		Outcome/Characteristic		
Host Type	**Years in Operation**		**Location**		**Size**		
	≤20	**≥20**	**Urban**	**Rural**	**Small**	**Medium**	**Large**
4-year	36 (4.73)	64 (4.73)	71 (1.27)	29 (1.27)	16 (3.66)	57 (5.12)	27 (4.07)
2-year	91 (1.79)	9 (1.79)	50 (0.51)	50 (0.51)	37 (3.93)	57 (4.16)	6 (1.41)
χ^2		117.27		219.69			34.02
Page #		12		12			14

Years in operation	**Size**		
	Small	**Medium**	**Large**
≤5	45 (6.11)	55 (6.11)	0 (0)
6 - 20	28 (6.95)	65 (6.88)	(8) (1.67)
>20	9 (2.48)	53 (6.45)	38 (6.12)
χ^2			62.47
Page #			14

TABLE C.2B (*continued*)

Subgroup	Outcome/Characteristic	
Race/ethnicity	Location	
	Rural	Urban
African American	15 (1.17)	85 (1.17)
White	71 (8.34)	29 (8.34)
Latino	33 (8.47)	67 (8.47)
Asian	14 (6.40)	86 (6.40)
Native American	79 (7.05)	21 (7.05)
Diverse	48 (19.18)	52 (19.18)
χ^2		122.81
Page #		14

Location	Services at Target Schools	
	Yes	No
Rural	77 (2.73)	23 (2.73)
Urban	60 (4.10)	40 (4.10)
χ^2		11.31
Page #		18

TABLE C.2B

SUPPORTING DOCUMENTATION: CHAPTER II
CHI-SQUARE TESTS

Subgroup	Outcome/Characteristic		Outcome/Characteristic	
Host Type	Residential Program		Services at Other Postsecondary Institutions	
	Yes	No	Yes	No
4-year	94 (2.99)	6 (2.99)	6 (1.19)	94 (1.19)
2-year	58 (4.10)	42 (4.10)	26 (3.77)	74 (3.77)
χ^2		50.01		24.34
Page #		18		18

SUPPORTING DOCUMENTATION: CHAPTER III

TABLE C.3A
SUPPORTING DOCUMENTATION: CHAPTER III
LOGITS AND REGRESSIONS

	Insufficient Academic Preparation As a Major Obstacle (logit)			Inadequate Financial Resources As a Major Obstacle (logit)			Personal Problems As a Major Obstacle (logit)			Most Important Goal Is Academic Improvement (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-0.39	0.45	-0.86	-0.17	0.42	-0.41	-2.45	0.46	-5.31	2.12	0.40	5.33
Location												
Rural	0.63	0.36	1.76	0.15	0.35	0.44	-2.11	0.47	-4.49	-0.05	0.33	-0.14
Host Type												
2-year	-0.07	0.33	-0.21	0.77	0.34	2.24	-1.36	0.59	-2.28	-0.87	0.31	-2.80
Size												
Small	0.45	0.41	1.12	-0.91	0.41	-2.23	0.13	0.52	0.24	0.33	0.37	0.90
Large	-0.49	0.59	-0.84	0.35	0.47	0.74	0.07	0.51	0.13	-0.43	0.41	-1.05
Race/Ethnicity												
Asian	-0.33	0.75	-0.44	0.96	0.73	1.32	-6.63	0.52	-12.64	-1.52	0.54	-2.84
Native America	1.12	0.75	1.48	-2.02	0.76	-2.65	-5.54	0.55	-10.16	-1.21	0.56	-2.18
Latino	0.47	0.52	0.89	0.00	0.44	0.01	-0.89	0.72	-1.23	-0.88	0.42	-2.08
White	-0.57	0.48	-1.18	-0.07	0.46	-0.15	1.37	0.47	2.92	-0.35	0.46	-0.77
Diverse	-0.95	0.63	-1.51	-0.19	0.68	-0.27	1.28	0.69	1.86	-0.39	0.65	-0.59
Years In Operation												
6-20	-0.93	0.41	-2.30	-0.17	0.44	-0.39	1.87	0.49	3.84	-0.18	0.41	-0.45
2-5	-0.63	0.51	-1.23	-0.02	0.55	-0.03	1.04	0.65	1.60	-0.64	0.48	-1.32
S_waite Adj DF		7.96			7.30			7.03			9.23	
S_waite F-stat		6.68			8.16			48.91			24.28	
Sample Size		181			181			181			182	
Page #		30			30			30			34	

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	Most Important Goal Is Personal Skills Development (logit)			Second Most Important Goal Is Personal Skills Development (logit)			Most Important Goal Is Peer Group Support (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-4.18	0.69	-6.09	-0.95	0.51	-1.84	-11.31	0.10	-118.23
Location									
Rural	0.15	0.58	0.25	-0.26	0.47	-0.55	-12.56	0.28	-44.30
Host Type									
2-year	-0.66	0.47	-1.40	-0.19	0.35	-0.54	-1.46	0.11	-13.67
Size									
Small	-0.55	0.65	-0.85	0.77	0.43	1.80	-4.20	0.29	-14.36
Large	0.13	0.64	0.20	-1.28	0.54	-2.36	-0.98	0.13	-7.32
Race/Ethnicity									
Asian	1.85	0.71	2.61	-1.18	0.91	-1.30	-0.35	0.14	-2.46
Native America	-3.95	0.45	-8.83	1.57	0.76	2.06	15.47	0.23	66.57
Latino	0.49	0.57	0.86	0.86	0.37	2.34	1.02	0.12	8.24
White	0.98	0.64	1.52	0.84	0.58	1.45	3.16	0.17	18.13
Diverse	0.90	0.79	1.14	0.53	0.59	0.89	1.63	0.14	11.75
Years In Operation									
6-20	1.86	0.76	2.43	-0.51	0.48	-1.05	1.81	0.12	15.03
2-5	1.06	0.86	1.23	-1.57	0.61	-2.59	-4.93	0.39	-12.55
S_waite Adj DF		9.12			7.04			3.12	
S_waite F-stat		20.51			11.31			56.77	
Sample Size		182			182			182	
Page #		34			34			35	

	Second Most Important Goal Is Exposure To College (logit)			At Least 20 Courses Offered In Summer (logit)			Calculus Offered (logit)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	-3.10	0.38	-8.07	-2.56	0.42	-6.05	0.12	0.46	0.26
Location									
Rural	0.10	0.40	0.26	0.92	0.31	3.02	-0.30	0.35	-0.85
Host Type									
2-year	-0.61	0.43	-1.42	1.37	0.44	3.14	-0.13	0.30	-0.42
Size									
Small	0.44	0.45	0.97	-0.28	0.43	-0.66	-0.26	0.38	-0.69
Large	2.08	0.50	4.18	2.08	0.47	4.45	1.04	0.48	2.19
Race/Ethnicity									
Asian	-0.89	0.94	-0.96	0.61	0.47	1.28	-0.49	0.56	-0.88
Native America	-0.66	0.73	-0.90	-7.83	0.49	-15.95	-1.33	0.54	-2.47
Latino	-2.68	0.59	-4.57	-1.12	0.69	-1.62	0.49	0.48	1.02
White	-1.17	0.49	-2.39	-0.62	0.39	-1.58	-0.83	0.54	-1.53
Diverse	1.50	0.66	2.27	-8.01	0.66	-12.20	1.22	0.51	2.39
Years In Operation									
6-20	2.59	0.52	4.95	-0.38	0.46	-0.84	0.65	0.48	1.36
2-5	2.19	0.50	4.36	1.27	0.52	2.45	0.55	0.45	1.22
S_waite Adj DF		6.48			5.19			6.77	
S_waite F-stat		9.20			53.63			8.40	
Sample Size		182			157			173	
Page #		35			48			48	

	Pre-Calculus Offered (logit)			Performing Arts Offered (logit)			Art Offered (logit)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	0.95	0.54	1.75	-0.78	0.45	-1.70	-0.87	0.48	-1.83
Location									
Rural	-0.48	0.39	-1.22	0.45	0.36	1.24	0.42	0.32	1.29
Host Type									
2-year	-1.21	0.38	-3.21	0.00	0.32	0.01	-0.07	0.30	-0.23
Size									
Small	0.32	0.51	0.64	0.25	0.41	0.60	0.31	0.41	0.77
Large	1.47	0.57	2.58	1.62	0.43	3.76	1.26	0.46	2.72
Race/Ethnicity									
Asian	-1.07	0.68	-1.56	1.05	0.69	1.52	0.56	0.56	0.98
Native America	0.62	0.51	1.23	-6.58	0.30	-21.70	0.09	0.47	0.20
Latino	0.73	0.58	1.26	-0.35	0.46	-0.76	-0.33	0.45	-0.72
White	0.13	0.59	0.21	0.01	0.42	0.02	1.00	0.51	1.97
Diverse	2.01	0.57	3.52	0.41	0.49	0.83	1.41	0.46	3.04
Years In Operation									
6-20	1.70	0.55	3.11	0.74	0.46	1.61	0.69	0.46	1.50
2-5	0.11	0.48	0.24	0.69	0.52	1.33	0.14	0.50	0.28
S_waite Adj DF		5.57			7.95			7.17	
S_waite F-stat		7.87			66.98			9.15	
Sample Size		178			178			178	
Page #		48			48			48	

	Journalism Offered (logit)			Calculus Required (logit)			Pre-Calculus Required (logit)			Performing Arts Required (logit)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	-1.02	0.49	-2.09	-0.84	0.49	-1.72	-0.53	0.44	-1.20	-2.88	0.50	-5.77
Location												
Rural	0.52	0.36	1.45	0.33	0.33	0.99	0.38	0.32	1.21	1.43	0.46	3.11
Host Type												
2-year	0.07	0.33	0.22	-0.10	0.35	-0.28	-0.44	0.32	-1.34	-1.24	0.56	-2.20
Size												
Small	0.28	0.37	0.77	-0.37	0.38	-0.96	-0.05	0.42	-0.12	-0.03	0.70	-0.04
Large	1.47	0.47	3.10	1.10	0.52	2.12	0.81	0.46	1.77	1.07	0.42	2.55
Race/Ethnicity												
Asian	0.05	0.57	0.09	-0.90	0.58	-1.57	-1.46	0.58	-2.53	0.78	0.81	0.97
Native America	-0.09	0.68	-0.14	-5.93	0.28	-21.46	-0.81	0.77	-1.05	-4.92	0.45	-10.85
Latino	0.77	0.50	1.54	-0.05	0.48	-0.11	0.05	0.57	0.08	0.74	0.75	0.99
White	0.79	0.55	1.43	-0.53	0.54	-0.98	-0.04	0.48	-0.07	-0.52	0.53	-0.98
Diverse	0.68	0.51	1.32	0.32	0.54	0.58	1.19	0.47	2.56	1.40	0.62	2.24
Years In Operation												
6-20	0.23	0.44	0.53	0.46	0.54	0.85	1.05	0.44	2.38	0.56	0.49	1.14
2-5	1.08	0.41	2.62	0.07	0.55	0.13	-0.09	0.50	-0.18	1.19	0.64	1.86
S_waite Adj DF		7.46			6.98			7.95			8.17	
S_waite F-stat		9.10			33.33			10.48			24.97	
Sample Size		176			173			177			177	
Page #		48			48			48			48	

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	Art Required (logit)				Journalism Required (logit)				Physical Education Offered (logit)				Geography Offered (logit)		
	b	se(b)	t-stat		b	se(b)	t-stat		b	se(b)	t-stat		b	se(b)	t-stat
Intercept	-3.32	0.60	-5.56		-3.96	0.57	-6.89		-0.10	0.44	-0.22		-1.17	0.36	-3.24
Location															
Rural	1.97	0.52	3.81		1.66	0.50	3.35		0.86	0.41	2.10		0.31	0.35	0.87
Host Type															
2-year	0.29	0.59	0.49		-0.19	0.48	-0.39		-0.14	0.33	-0.42		0.03	0.38	0.09
Size															
Small	-0.35	0.55	-0.65		-0.12	0.49	-0.24		0.17	0.39	0.43		-0.25	0.36	-0.70
Large	1.18	0.47	2.51		1.42	0.48	2.94		1.06	0.45	2.34		-0.11	0.41	-0.27
Race/Ethnicity															
Asian	-5.58	0.51	-11.01		-0.39	0.73	-0.53		0.68	0.70	0.97		-0.42	0.47	-0.90
Native America	-6.93	0.51	-13.48		-5.42	0.55	-9.84		-0.07	0.73	-0.10		-6.02	0.30	-19.88
Latino	-0.12	0.77	-0.15		0.64	0.58	1.09		0.76	0.52	1.46		-1.24	0.59	-2.10
White	-0.45	0.60	-0.75		-0.19	0.60	-0.31		0.52	0.63	0.82		-1.56	0.44	-3.57
Diverse	2.38	0.55	4.32		2.01	0.72	2.79		0.64	0.47	1.34		-0.85	0.65	-1.31
Years In Operation															
6-20	-0.35	0.50	-0.70		0.24	0.54	0.44		0.54	0.54	1.01		0.68	0.44	1.56
2-5	0.27	0.84	0.32		2.19	0.61	3.58		0.08	0.44	0.17		1.70	0.42	4.06
S_waite Adj DF		9.27				8.44				6.68				7.76	
S_waite F-stat		73.45				35.47				5.79				37.00	
Sample Size		177				175				178				172	
Page #		48				48				48				48	

	Sociology Offered (logit)			Psychology Offered (logit)			Geography Required (logit)			Sociology Required (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-2.73	0.42	-6.50	-3.62	0.49	-7.42	-2.44	0.37	-6.58	-2.84	0.54	-5.27
Location												
Rural	0.15	0.33	0.45	0.23	0.41	0.58	0.43	0.45	0.95	-0.60	0.39	-1.54
Host Type												
2-year	0.05	0.37	0.15	-0.20	0.44	-0.46	-0.22	0.46	-0.49	0.36	0.46	0.77
Size												
Small	0.27	0.46	0.60	0.09	0.54	0.17	0.14	0.49	0.28	-0.31	0.59	-0.52
Large	0.09	0.41	0.21	1.36	0.48	2.85	0.41	0.42	0.99	-0.54	0.56	-0.96
Race/Ethnicity												
Asian	0.93	0.57	1.62	1.32	0.53	2.47	-1.03	0.56	-1.85	-0.50	1.01	-0.49
Native America	-0.34	0.60	-0.57	1.42	0.59	2.39	-6.47	0.34	-19.30	-5.30	0.38	-14.06
Latino	0.25	0.73	0.35	1.33	0.73	1.83	-1.10	0.70	-1.57	-0.41	0.82	-0.50
White	0.33	0.47	0.70	1.25	0.52	2.41	-2.70	0.50	-5.38	-0.02	0.56	-0.04
Diverse	-0.52	0.54	-0.97	0.38	0.91	0.42	-2.02	0.62	-3.24	-1.02	0.72	-1.41
Years In Operation												
6-20	1.20	0.46	2.64	0.87	0.46	1.90	1.54	0.52	2.95	1.03	0.58	1.77
2-5	2.08	0.47	4.41	2.24	0.50	4.49	2.61	0.52	5.00	2.26	0.65	3.47
S_waite Adj DF		7.72			7.90			5.71			7.74	
S_waite F-stat		2.27			2.11			25.79			20.62	
Sample Size		172			172			173			173	
Page #		48			48			48			48	

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	Psychology Required (logit)			Algebra I Required (logit)			Algebra II Required (logit)			Geometry Required (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-3.58	0.47	-7.53	1.59	0.38	4.22	1.31	0.34	3.82	1.32	0.34	3.90
Location												
Rural	-0.31	0.52	-0.60	0.17	0.35	0.49	-0.06	0.31	-0.18	-0.41	0.31	-1.32
Host Type												
2-year	-0.38	0.72	-0.53	-0.47	0.41	-1.14	-0.54	0.34	-1.61	-0.53	0.35	-1.51
Size												
Small	-0.64	0.72	-0.89	-1.13	0.42	-2.65	-0.67	0.38	-1.75	-0.95	0.42	-2.28
Large	0.80	0.61	1.30	-0.17	0.50	-0.34	0.22	0.46	0.48	0.08	0.45	0.18
Race/Ethnicity												
Asian	-5.61	0.44	-12.74	-0.76	0.61	-1.25	-0.86	0.55	-1.56	-0.53	0.61	-0.87
Native America	-5.19	0.55	-9.50	-1.30	0.56	-2.34	-1.68	0.67	-2.50	-1.48	0.68	-2.18
Latino	0.57	0.75	0.76	-0.76	0.61	-1.25	-0.13	0.33	-0.38	-0.07	0.33	-0.21
White	0.32	0.65	0.50	-0.84	0.51	-1.63	-0.63	0.49	-1.29	-0.75	0.47	-1.60
Diverse	0.58	1.16	0.50	0.29	0.54	0.53	0.46	0.52	0.87	0.66	0.59	1.12
Years In Operation												
6-20	0.51	0.48	1.05	1.24	0.48	2.59	0.94	0.49	1.93	1.16	0.48	2.44
2-5	2.34	0.74	3.17	0.75	0.45	1.66	0.64	0.45	1.41	0.97	0.49	1.98
S_waite Adj DF		6.84			6.92			7.06			7.56	
S_waite F-stat		23.89			13.74			14.50			15.16	
Sample Size		172			179			178			179	
Page #		48			48			48			48	

	Physics Required (logit)			Biology Required (logit)			Writing Required (logit)			Literature Required (logit)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	-0.28	0.43	-0.65	0.75	0.31	2.40	2.45	0.48	5.11	-0.03	0.44	-0.07
Location												
Rural	0.17	0.39	0.44	-0.50	0.38	-1.33	-0.79	0.54	-1.47	-0.45	0.37	-1.23
Host Type												
2-year	-0.61	0.34	-1.81	-0.95	0.35	-2.76	-0.68	0.51	-1.34	-0.69	0.29	-2.42
Size												
Small	-0.31	0.41	-0.76	0.05	0.44	0.10	-0.51	0.63	-0.80	-0.12	0.35	-0.35
Large	0.26	0.47	0.54	0.30	0.41	0.75	0.01	0.68	0.02	0.56	0.41	1.36
Race/Ethnicity												
Asian	-1.67	0.55	-3.05	-0.23	0.73	-0.31	-1.46	0.83	-1.75	0.19	0.60	0.32
Native America	-1.46	0.96	-1.52	0.05	0.56	0.09	6.06	0.56	10.86	1.12	0.66	1.71
Latino	-0.93	0.51	-1.82	-1.00	0.46	-2.14	-0.05	0.57	-0.08	0.30	0.39	0.77
White	0.11	0.52	0.21	-0.46	0.51	-0.90	-0.46	0.71	-0.65	-0.17	0.40	-0.44
Diverse	-1.05	0.71	-1.49	0.72	0.60	1.20	6.07	0.53	11.56	1.93	0.66	2.94
Years In Operation												
6-20	0.60	0.48	1.26	1.08	0.42	2.58	1.15	0.55	2.10	1.43	0.39	3.68
2-5	0.53	0.45	1.18	0.78	0.60	1.31	1.75	0.76	2.29	1.64	0.41	4.00
S_waite Adj DF		7.78			7.01			4.96			8.08	
S_waite F-stat		7.77			11.61			21.95			16.75	
Sample Size		177			179			181			180	
Page #		48			48			48			48	

	Reading Required (logit)			Any Courses Offered In Academic Year (logit)			Speech Required (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	1.29	0.36	3.61	2.95	0.35	8.53	-0.93	0.49	-1.88
Location									
Rural	0.55	0.46	1.20	-0.25	0.44	-0.57	0.78	0.38	2.04
Host Type									
2-year	-0.38	0.41	-0.93	-0.09	0.45	-0.20	-0.28	0.38	-0.75
Size									
Small	-0.13	0.50	-0.25	0.84	0.64	1.31	-0.52	0.40	-1.31
Large	-0.06	0.47	-0.14	1.80	0.54	3.33	-0.80	0.46	-1.73
Race/Ethnicity									
Asian	-0.92	0.65	-1.41	-3.52	0.92	-3.84	-0.99	0.60	-1.65
Native America	-0.30	0.78	-0.38	-10.69	0.65	-16.40	-1.07	0.99	-1.08
Latino	0.45	0.47	0.96	-2.74	0.68	-4.00	-0.17	0.51	-0.32
White	-1.65	0.52	-3.19	-3.52	0.56	-6.32	-1.21	0.43	-2.81
Diverse	1.15	0.76	1.51	-1.92	0.75	-2.54	-0.04	0.68	-0.05
Years In Operation									
6-20	1.20	0.47	2.54	1.34	0.56	2.39	0.48	0.52	0.93
2-5	1.20	0.52	2.32	2.05	0.70	2.94	0.41	0.51	0.80
S_waite Adj DF		6.12			7.10			7.47	
S_waite F-stat		8.77			27.37			6.71	
Sample Size		180			160			173	
Page #		48			48			48	

	Physical Education Required (logit)			Foreign Language Offered (logit)			ESL Offered (logit)			More Than 75 Percent of Summer Courses Required (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-0.97	0.48	-2.02	-0.46	0.45	-1.02	-2.65	0.45	-5.85	-0.36	0.45	-0.80
Location												
Rural	1.09	0.35	3.13	-0.40	0.40	-1.01	-1.60	0.45	-3.58	0.29	0.37	0.76
Host Type												
2-year	-0.16	0.32	-0.48	-0.29	0.35	-0.82	1.30	0.46	2.84	-0.47	0.36	-1.31
Size												
Small	0.45	0.36	1.25	0.28	0.38	0.72	-1.39	0.84	-1.66	0.34	0.46	0.73
Large	-0.05	0.42	-0.12	0.49	0.49	0.99	0.86	0.45	1.89	-0.32	0.41	-0.78
Race/Ethnicity												
Asian	-0.75	0.70	-1.07	-2.05	0.78	-2.65	3.53	0.66	5.34	-1.22	0.54	-2.24
Native America	-0.39	0.54	-0.72	-5.57	0.28	-19.61	1.86	0.74	2.52	-0.31	0.72	-0.42
Latino	1.00	0.42	2.35	-0.28	0.46	-0.61	1.13	0.61	1.85	-0.54	0.66	-0.81
White	-0.77	0.40	-1.91	0.83	0.52	1.61	0.92	0.62	1.50	-0.99	0.51	-1.93
Diverse	1.38	0.51	2.70	-0.84	0.63	-1.32	1.41	0.62	2.27	1.58	0.63	2.53
Years In Operation												
6-20	-0.06	0.41	-0.15	-0.53	0.48	-1.12	-0.51	0.43	-1.20	0.75	0.47	1.59
2-5	-0.45	0.49	-0.93	0.84	0.49	1.71	-0.64	0.74	-0.86	0.84	0.55	1.51
S_waite Adj DF		8.40			7.44			8.49			7.18	
S_waite F-stat		11.49			38.26			18.89			1.49	
Sample Size		178			174			173			157	
Page #		48			49			49			49	

	At Least 16 Courses Required (logit)			Computer Programming Required (logit)			Software Use Required (logit)			JTPA Placements Made (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-1.51	0.64	-2.34	-2.13	0.38	-5.61	-0.62	0.48	-1.28	0.08	0.41	0.20
Location												
Rural	0.53	0.46	1.16	0.92	0.36	2.56	0.17	0.37	0.46	-0.68	0.33	-2.04
Host Type												
2-year	-0.45	0.53	-0.85	-0.03	0.42	-0.06	-0.39	0.34	-1.12	0.18	0.34	0.54
Size												
Small	-0.84	0.51	-1.64	0.41	0.51	0.80	0.53	0.41	1.30	-0.65	0.36	-1.81
Large	-0.10	0.52	-0.19	0.61	0.38	1.62	-0.09	0.41	-0.21	0.01	0.45	0.01
Race/Ethnicity												
Asian	-0.70	0.59	-1.18	-5.34	0.30	-17.60	-0.71	0.67	-1.05	-0.96	0.57	-1.68
Native America	-5.23	0.58	-9.01	0.22	0.68	0.33	0.28	0.69	0.41	-1.04	0.93	-1.12
Latino	-0.81	0.66	-1.24	0.99	0.50	1.95	0.80	0.43	1.89	0.16	0.40	0.39
White	-0.95	0.48	-1.97	-1.04	0.38	-2.70	-0.17	0.47	-0.35	-0.56	0.36	-1.55
Diverse	1.91	0.60	3.21	1.37	0.61	2.27	1.61	0.57	2.84	-0.07	0.58	-0.12
Years In Operation												
6-20	0.38	0.83	0.46	0.08	0.42	0.20	0.03	0.45	0.06	0.21	0.43	0.48
2-5	1.23	0.72	1.70	-0.09	0.56	-0.16	0.35	0.54	0.65	0.07	0.47	0.15
S_waite Adj DF		5.80			6.92			7.45			8.34	
S_waite F-stat		9.43			63.26			7.09			12.49	
Sample Size		157			176			178			178	
Page #		49			49			49			56	

TABLE C.3B

SUPPORTING DOCUMENTATION: CHAPTER III
CHI-SQUARE TESTS

Subgroup	Outcome/Characteristic		Outcome/Characteristic		Outcome/Characteristic	
	Academic improvement is one of top 2 goals		Major emphasis on remediation in summer		Major emphasis on support in summer	
	Yes	No	Yes	No	Yes	No
Strong math/science curriculum	94 (2.26)	6 (2.26)	26 (8.00)	74 (8.00)	11 (2.51)	89 (2.51)
Foundational curriculum	87 (3.12)	13 (3.12)	12 (2.57)	88 (2.57)	21 (4.64)	79 (4.64)
Unstructured curriculum	77 (6.55)	23 (6.55)	17 (5.75)	83 (5.75)	39 (10.68)	61 (10.68)
Other structured curriculum	83 (4.52)	17 (4.52)	42 (7.31)	58 (7.31)	52 (2.13)	95 (2.13)
χ^2		9.11		15.10		13.95
Page #		52		52		52

SUPPORTING DOCUMENTATION: CHAPTER IV

TABLE C.4A
SUPPORTING DOCUMENTATION

	Summer, Frequent Individualized Instruction (logit)			Summer, Frequent Computer-Based Instruction (logit)			Academic Year, Frequent Computer-Based Instruction (logit)			Summer, Frequent Lectures By College Faculty (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-0.95	0.47	-2.02	-2.98	0.32	-9.38	-2.55	0.34	-7.45	-2.72	0.37	-7.43
Location												
Rural	0.54	0.40	1.36	0.01	0.34	0.02	-0.13	0.43	-0.30	0.11	0.40	0.27
Host Type												
2-year	0.81	0.35	2.29	1.05	0.40	2.63	0.91	0.40	2.27	0.81	0.38	2.14
Size												
Small	0.45	0.34	1.33	-1.22	0.47	-2.63	-0.62	0.57	-1.10	-0.71	0.44	-1.61
Large	0.52	0.51	1.03	0.86	0.38	2.27	0.53	0.43	1.23	0.38	0.39	0.96
Race/Ethnicity												
Asian	-0.26	0.57	-0.45	1.02	0.50	2.04	0.47	0.55	0.85	1.11	0.71	1.57
Native America	-0.20	0.72	-0.28	0.20	0.83	0.24	-5.11	0.34	-15.12	-0.14	0.49	-0.30
Latino	0.27	0.48	0.57	0.59	0.46	1.28	0.02	0.42	0.04	0.76	0.54	1.42
White	-0.80	0.44	-1.82	0.42	0.45	0.93	-0.34	0.50	-0.69	0.04	0.54	0.08
Diverse	-0.27	0.80	-0.34	0.52	0.70	0.75	0.75	0.74	1.01	0.21	0.71	0.30
Years In Operation												
6-20	-0.56	0.40	-1.39	0.97	0.37	2.59	0.70	0.41	1.73	0.65	0.41	1.58
2-5	-0.65	0.46	-1.42	1.25	0.55	2.26	0.40	0.55	0.72	0.01	0.56	0.03
S_waite Adj DF		7.27			9.54			8.59			9.48	
S_waite F-stat		6.68			18.52			48.17			12.81	
Sample Size		181			180			180			180	
Page #		61			61			61			61	

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	Summer, Frequently Devote Time To Specific Theme (logit)			Summer, Frequently Use Cross-Disciplinary Themes (logit)			Written Evaluations Made Often (logit)			Written Evaluations Not Made Often (logit)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	-0.15	0.35	-0.44	-1.57	0.60	-2.63	-2.23	0.49	-4.52	-1.06	0.60	-1.78
Location												
Rural	-0.70	0.33	-2.13	-0.33	0.36	-0.92	1.16	0.48	2.41	-0.47	0.36	-1.28
Host Type												
2-year	0.26	0.29	0.90	0.05	0.33	0.17	-1.34	0.48	-2.82	1.17	0.34	3.48
Size												
Small	1.02	0.33	3.07	0.48	0.40	1.20	-2.29	0.51	-4.50	-0.07	0.51	-0.13
Large	-0.89	0.31	-2.91	0.89	0.49	1.82	-2.85	0.92	-3.10	0.20	0.70	0.28
Race/Ethnicity												
Asian	0.65	0.55	1.18	0.89	0.58	1.54	-6.21	0.47	-13.13	-0.15	0.97	-0.15
Native America	0.29	0.61	0.47	0.62	0.56	1.10	0.32	0.64	0.50	-0.89	0.39	-2.30
Latino	0.34	0.46	0.74	-0.33	0.49	-0.67	-0.23	0.70	-0.32	-1.46	0.47	-3.10
White	-0.11	0.40	-0.28	0.43	0.45	0.96	1.18	0.64	1.85	-0.91	0.43	-2.14
Diverse	2.31	0.89	2.58	1.90	0.64	2.97	2.45	0.67	3.62	-2.02	0.61	-3.34
Years In Operation												
6-20	0.26	0.43	0.60	0.80	0.50	1.61	1.34	0.63	2.12	-0.76	0.53	-1.43
2-5	-0.70	0.43	-1.64	0.72	0.54	1.33	2.04	0.56	3.66	-0.34	0.60	-0.58
S_waite Adj DF		7.47			7.41			6.21			5.99	
S_waite F-stat		12.47			7.97			22.38			7.68	
Sample Size		181			181			174			174	
Page #		66			66			68			68	

	No Students Earned HS Credit (logit)			All Students Earned College Credit (logit)			No Students Earned College Credit (logit)			Send Parents Evaluations (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.24	0.46	0.53	-0.52	0.46	-1.13	-0.91	0.54	-1.67	-0.09	0.42	-0.21
Location												
Rural	0.37	0.32	1.14	0.03	0.34	0.08	-0.42	0.44	-0.95	-0.13	0.37	-0.34
Host Type												
2-year	0.52	0.36	1.45	-0.02	0.29	-0.07	-0.60	0.45	-1.35	0.41	0.35	1.16
Size												
Small	0.57	0.37	1.52	-0.48	0.35	-1.36	0.31	0.42	0.75	0.42	0.39	1.09
Large	0.62	0.44	1.42	0.57	0.48	1.18	-0.06	0.54	-0.12	0.78	0.40	1.96
Race/Ethnicity												
Asian	-2.48	0.66	-3.72	-0.24	0.48	-0.49	0.68	0.59	1.15	-0.13	0.67	-0.20
Native America	-2.58	0.99	-2.61	-0.27	0.74	-0.37	0.42	0.63	0.66	-1.59	0.95	-1.69
Latino	-2.21	0.64	-3.44	1.53	0.38	4.00	-1.89	0.79	-2.39	-0.37	0.54	-0.68
White	-1.14	0.43	-2.68	1.32	0.53	2.52	-1.43	0.58	-2.47	-0.66	0.42	-1.57
Diverse	-2.37	0.58	-4.10	1.27	0.51	2.48	0.13	0.54	0.24	-0.92	0.68	-1.34
Years In Operation												
6-20	0.60	0.42	1.44	1.12	0.43	2.62	-0.61	0.50	-1.22	0.46	0.46	1.00
2-5	0.72	0.56	1.29	0.12	0.44	0.27	0.56	0.57	0.97	-0.12	0.52	-0.23
S_waite Adj DF		8.19			6.68			7.67			8.08	
S_waite F-stat		12.10			8.81			11.36			5.82	
Sample Size		182			177			177			182	
Page #		70			70			72			75	

	Discuss Evaluations with Parents (logit)			Hold Financing Workshops (logit)			Hold Workshops on Adolescent Problems (logit)			Make Home Visits (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.26	0.45	0.58	-0.63	0.44	-1.41	-1.93	0.39	-4.93	-0.65	0.46	-1.40
Location												
Rural	-0.06	0.33	-0.20	-0.19	0.33	-0.58	-0.09	0.36	-0.26	0.23	0.36	0.65
Host Type												
2-year	-0.79	0.29	-2.70	-0.02	0.36	-0.06	-1.07	0.46	-2.35	-0.38	0.31	-1.25
Size												
Small	0.52	0.41	1.26	0.14	0.37	0.38	1.66	0.41	4.02	1.16	0.42	2.78
Large	0.53	0.44	1.21	1.04	0.42	2.46	1.85	0.45	4.13	0.51	0.48	1.08
Race/Ethnicity												
Asian	-0.84	0.58	-1.46	0.10	0.66	0.16	-0.91	0.60	-1.50	0.26	0.55	0.47
Native America	-6.72	0.29	-23.26	-0.38	0.50	-0.76	-0.83	0.73	-1.14	-0.61	0.59	-1.03
Latino	-0.38	0.36	-1.07	-0.31	0.48	-0.66	-1.01	0.65	-1.56	0.14	0.42	0.34
White	-0.77	0.48	-1.60	-1.22	0.32	-3.86	-1.49	0.46	-3.25	-0.84	0.64	-1.30
Diverse	0.43	0.56	0.77	0.47	0.58	0.80	0.29	0.77	0.38	1.02	0.59	1.72
Years In Operation												
6-20	0.86	0.42	2.04	0.27	0.46	0.59	0.72	0.41	1.75	0.02	0.49	0.05
2-5	0.32	0.55	0.57	-0.27	0.46	-0.58	1.48	0.49	3.04	-0.33	0.42	-0.80
S_waite Adj DF		6.86			8.05			7.06			6.75	
S_waite F-stat		72.34			13.71			10.86			6.45	
Sample Size		182			182			182			180	
Page #		75			75			75			75	

Require Parents to Contribute Time (logit)

	b	se(b)	t-stat
Intercept	-0.26	0.44	-0.59
Location			
Rural	0.37	0.38	0.96
Host Type			
2-year	-0.37	0.38	-0.96
Size			
Small	0.90	0.36	2.53
Large	0.50	0.43	1.18
Race/Ethnicity			
Asian	-2.79	0.71	-3.93
Native America	-2.13	0.69	-3.10
Latino	-0.53	0.51	-1.05
White	-2.24	0.42	-5.36
Diverse	-0.23	0.63	-0.36
Years In Operation			
6-20	0.04	0.47	0.08
2-5	0.25	0.52	0.48
S_waite Adj DF		7.13	
S_waite F-stat		11.30	
Sample Size		182	
Page #		75	

	Discuss Evaluations With Schools More Than Once a Year (logit)			Send Evaluations to Schools More Than Once a Year (logit)			Develop Plans With Schools More Than Once a Year (logit)			Use School Staff As Tutors More Than Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-0.16	0.28	-0.56	-1.19	0.33	-3.58	0.14	0.27	0.50	-0.38	0.29	-1.28
% schools associated for 5+ years	0.32	0.72	0.44	1.33	0.66	2.01	-0.50	0.53	-0.94	-0.03	0.52	-0.07
Project Age	-0.04	0.03	-1.12	-0.07	0.02	-3.10	0.02	0.02	0.83	0.01	0.02	0.30
S_waite Adj DF		1.63			1.92			1.81			1.98	
S_waite F-stat		0.98			4.69			0.60			0.07	
Sample Size		182			182			180			181	
Page #		78			78			78			78	

	Use School Staff As Instructors More Than Once a Year (logit)			Hold Workshops For School Staff More Than Once a Year (logit)			Involve Schools In Developing Courses More Than Once a Year (logit)			Discuss Evaluations With Schools At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-0.17	0.29	-0.58	-1.89	0.36	-5.29	-0.48	0.31	-1.54	0.79	0.30	2.64
% schools associated for 5+ years	0.10	0.51	0.19	-1.48	0.67	-2.21	0.46	0.60	0.76	0.87	0.59	1.48
Project Age	0.02	0.02	0.82	0.08	0.03	2.68	-0.05	0.03	-1.62	-0.05	0.03	-1.74
S_waite Adj DF		1.73			2.00			1.76			1.82	
S_waite F-stat		0.87			3.71			1.86			1.98	
Sample Size		177			181			179			181	
Page #		78			78			78			78	

	Send Evaluations to Schools At Least Once a Year (logit)			Develop Plans With Schools At Least Once a Year (logit)			Use School Staff As Tutors At Least Once a Year (logit)			Use School Staff As Instructors At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.10	0.30	0.34	1.86	0.38	4.91	0.20	0.30	0.67	1.06	0.46	2.33
% schools associated for 5+ years	-0.04	0.50	-0.07	0.00	0.65	0.00	-0.11	0.49	-0.22	-1.17	0.79	-1.49
Project Age	0.01	0.02	0.39	-0.03	0.03	-0.91	0.00	0.02	0.07	0.12	0.03	3.76
S_waite Adj DF		1.89			1.87			1.99			1.68	
S_waite F-stat		0.12			0.62			0.03			8.50	
Sample Size		182			180			181			177	
Page #		78			78			78			78	

	Hold Workshops For School Staff At Least Once a Year (logit)			Involve Schools In Developing Courses At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.67	0.29	2.30	0.43	0.33	1.30
% schools associated for 5+ years	-0.50	0.49	-1.03	-0.11	0.48	-0.22
Project Age	0.02	0.02	0.70	0.03	0.02	1.24
S_waite Adj DF		1.98			1.98	
S_waite F-stat		0.54			0.98	
Sample Size		181			179	
Page #		78			78	

	Discuss Evaluations With Schools More Than Once a Year (logit)			Send Evaluations to Schools More Than Once a Year (logit)			Develop Plans With Schools More Than Once a Year (logit)			Use School Staff As Tutors More Than Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-sta**
Intercept	-0.71	0.34	-2.09	-1.85	0.33	-5.52	-0.24	0.31	-0.8	-0.71	0.33	-2.19
Number of Target Schools	0.01	0.03	0.38	0.03	0.02	1.39	0.04	0.03	1.47	0.05	0.03	1.62
S_waite Adj DF		1.00			1.00			1.00			1.00	
S_waite F-stat		0.14			1.92			2.15			2.62	
Sample Size		181			182			180			181	
Page #		78			78			78			78	

	Use School Staff As Instructors More Than Once a Year (logit)			Hold Workshops For School Staff More Than Once a Year (logit)			Involve Schools In Developing Courses More Than Once a Year (logit)			Discuss Evaluations With Schools At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-sta**
Intercept	0.18	0.34	0.54	-2.09	0.42	-5.00	-0.59	0.32	-1.81	0.35	0.30	1.17
Number of Target Schools	0.01	0.03	0.20	0.08	0.04	1.97	-0.05	0.03	-1.60	0.01	0.03	0.41
S_waite Adj DF		1.00			1.00			1.00			1.00	
S_waite F-stat		0.04			3.89			2.57			0.17	
Sample Size		177			181			179			181	
Page #		78			78			78			78	

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	Send Evaluations to Schools At Least Once a Year (logit)			Develop Plans With Schools At Least Once a Year (logit)			Use School Staff As Tutors At Least Once a Year (logit)			Use School Staff As Instructors At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-0.08	0.34	-0.24	1.58	0.34	4.68	-0.19	0.28	-0.70	1.63	0.58	2.80
Number of Target Schools	0.04	0.03	1.06	-0.02	0.02	-0.94	0.04	0.03	1.44	0.06	0.04	1.45
S_waite Adj DF		1.00			1.00			1.00			1.00	
S_waite F-stat		1.13			0.87			2.08			2.10	
Sample Size		182			180			181			177	
Page #		78			78			78			78	

	Hold Workshops For School Staff At Least Once a Year (logit)			Involve Schools In Developing Courses At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.69	0.29	2.36	0.58	0.33	1.79
Number of Target Schools	-0.01	0.02	-0.42	0.03	0.03	1.07
S_waite Adj DF		1.00			1.00	
S_waite F-stat		0.18			1.14	
Sample Size		181			179	
Page #		78			78	

	Discuss Evaluations with Schools At Least Once a Year (logit)			Develop Plans With Schools At Least Once a Year (logit)			Send Evaluations to Schools At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	-0.43	0.44	-0.98	0.07	0.51	0.14	-0.10	0.44	-0.22
Location									
Rural	0.79	0.35	2.28	1.66	0.55	3.03	-0.01	0.36	-0.02
Host Type									
2-year	-0.61	0.30	-2.00	-0.49	0.38	-1.31	0.00	0.33	0.01
Size									
Small	0.39	0.36	1.09	0.47	0.41	1.13	0.90	0.34	2.63
Large	0.53	0.47	1.13	0.32	0.64	0.50	0.24	0.46	0.52
Race/Ethnicity									
Asian	0.74	0.55	1.33	0.81	0.65	1.24	1.53	0.67	2.29
Native America	0.70	0.61	1.15	0.81	0.43	1.91	1.42	0.57	2.51
Latino	-0.17	0.36	-0.47	1.08	0.48	2.26	0.33	0.45	0.74
White	-0.04	0.47	-0.09	2.66	0.69	3.83	0.79	0.50	1.57
Diverse	1.58	0.60	2.61	1.97	0.70	2.81	-0.75	0.63	-1.18
Years In Operation									
6-20	1.19	0.43	2.79	1.26	0.56	2.27	-0.21	0.42	-0.49
2-5	0.56	0.40	1.41	0.26	0.59	0.45	-0.51	0.46	-1.11
S_waite Adj DF		7.20			6.50			7.33	
S_waite F-stat		11.81			16.91			8.49	
Sample Size		181			180			182	
Page #		79			79			79	

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	Involve Schools In Developing Courses At Least Once A Year (logit)			Use School Staff As Tutors At Least Once a Year (logit)			Use School Staff As Instructors More Than Once a Year (logit)			Use School Staff As Instructors At Least Once a Year (logit)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.60	0.46	1.29	0.31	0.35	0.87	1.07	0.35	3.10	3.90	0.60	6.51
Location												
Rural	0.50	0.37	1.37	0.13	0.34	0.38	-0.85	0.28	-2.99	1.10	0.62	1.78
Host Type												
2-year	0.54	0.34	1.62	1.06	0.30	3.51	1.23	0.37	3.36	0.17	0.54	0.32
Size												
Small	0.85	0.38	2.24	-0.03	0.44	-0.08	0.58	0.40	1.47	2.06	0.69	3.00
Large	0.27	0.43	0.63	-0.46	0.37	-1.25	0.20	0.37	0.53	0.22	0.59	0.38
Race/Ethnicity												
Asian	0.74	0.72	1.02	-1.03	0.76	-1.36	-2.21	0.65	-3.39	-0.32	1.23	-0.26
Native America	0.03	0.77	0.03	2.21	0.36	6.10	-1.45	0.59	-2.43	-3.53	1.06	-3.35
Latino	-0.75	0.47	-1.60	0.27	0.47	0.56	-0.62	0.55	-1.14	-1.07	0.74	-1.46
White	0.02	0.43	0.05	-0.25	0.47	-0.54	-1.10	0.44	-2.49	-2.07	0.70	-2.96
Diverse	1.22	0.53	2.30	0.88	0.66	1.33	-1.78	0.54	-3.28	-0.85	0.60	-1.43
Years In Operation												
6-20	-0.47	0.45	-1.03	-0.68	0.37	-1.83	-0.51	0.45	-1.15	-2.61	0.59	-4.42
2-5	-0.63	0.50	-1.25	-0.58	0.52	-1.10	-1.06	0.41	-2.59	-1.75	0.70	-2.51
S_waite Adj DF		8.74			7.07			7.41			6.57	
S_waite F-stat		9.70			8.59			11.43			10.02	
Sample Size		180			181			177			177	
Page #		79			79			79			79	

TABLE C.4B

SUPPORTING DOCUMENTATION: CHAPTER IV
CHI-SQUARE TESTS

Subgroup	Outcome/Characteristic		Outcome/Characteristic		Outcome/Characteristic	
Summer Emphases	Frequent lab work in summer		Frequent independent research in summer		Frequent small group instruction in summer	
	Yes	No	Yes	No	Yes	No
Support only	23 (7.39)	77 (7.39)	8 (2.63)	92 (2.63)	100 (0)	0 (0)
Remediation or remediation/support	33 (9.69)	67 (9.69)	0 (0)	100 (0)	100 (0)	100 (0)
Enrichment or enrichment/support	62 (5.63)	38 (5.63)	23 (4.98)	77 (4.98)	82 (3.0)	18 (3.0)
Several or no emphases	39 (8.60)	61 (8.60)	33 (8.52)	67 (8.52)	88 (3.41)	12 (3.41)
χ^2		19.44		16.92		40.94
Page #		61		61		61

Summer Emphases	Frequent individualized instruction in summer	
	Yes	No
Support only	17 (4.02)	83 (4.02)
Remediation or remediation/support	54 (11.00)	46 (11.00)
Enrichment or enrichment/support	29 (5.06)	71 (5.06)
Several or no emphases	38 (8.66)	62 (8.66)
χ^2		10.09
Page #		61

TABLE C.4B *(continued)*

Subgroup	Outcome/Characteristic		Outcome/Characteristic		Outcome/Characteristic	
Academic Year Emphases	Frequent small group instruction in academic year		Frequent individualized instruction in academic year		Frequent lab work in academic year	
	Yes	No	Yes	No	Yes	No
Support only	86 (6.98)	14 (6.98)	25 (7.20)	75 (7.20)	5 (1.36)	95 (1.36)
Remediation or remediation/support	88 (4.46)	12 (4.46)	60 (7.50)	40 (7.50)	7 (4.57)	93 (4.57)
Enrichment or enrichment/support	65 (8.22)	35 (8.22)	34 (7.34)	66 (7.34)	26 (7.08)	74 (7.08)
Several or no emphases	49 (7.39)	51 (7.39)	21 (5.09)	79 (5.09)	8 (2.11)	92 (2.11)
χ^2		22.61		14.85		9.75
Page #		61		61		61

Academic Year Emphases	Frequent homework assignments in academic year	
	Yes	No
Support only	25 (4.87)	75 (4.87)
Remediation or remediation/support	54 (7.50)	46 (7.50)
Enrichment or enrichment/support	35 (5.76)	65 (5.76)
Several or no emphases	26 (6.51)	74 (6.51)
χ^2		9.58
Page #		61

TABLE C.4B (*continued*)

Subgroup	Outcome/Characteristic			Outcome/Characteristic			Outcome/Characteristic		
Summer Emphases	Summer, frequently use instructor's syllabus			Summer, frequently devote time to specific theme			Summer, frequently use cross-disciplinary themes		
	Never	Sometimes	Often	Never	Sometimes	Often	Never	Sometimes	Often
Support only	0 (0)	33 (10.29)	67 (10.29)	6 (2.31)	78 (7.77)	16 (7.25)	24 (8.03)	67 (8.69)	9 (2.64)
Remediation or remediation/support	0 (0)	0 (0)	100 (0)	30 (10.33)	55 (10.84)	15 (6.40)	23 (10.52)	59 (11.06)	18 (7.83)
Enrichment or enrichment/support	0 (0)	19 (4.84)	81 (4.84)	13 (4.86)	33 (5.23)	53 (6.33)	9 (4.38)	54 (6.29)	37 (5.32)
Several or no emphases	0.96 (0.13)	27 (8.34)	72 (8.34)	8 (2.79)	32 (5.02)	60 (5.90)	6 (1.87)	49 (8.77)	45 (8.81)
χ^2			403.65			23.81			28.69
Page #			66			66			66

Summer Emphases	Some earn high school credit		Some earn college credit	
	Yes	No	Yes	No
Support only	42 (10.94)	58 (10.94)	71 (8.50)	29 (8.50)
Remediation or remediation/support	32 (9.36)	68 (9.36)	92 (4.96)	8 (4.96)
Enrichment or enrichment/support	53 (5.58)	47 (5.58)	78 (5.03)	22 (5.03)
Several or no emphases	40 (8.72)	60 (8.72)	90 (2.53)	10 (2.53)
χ^2		3.30		9.20
Page #		72		72

TABLE C.4B (*continued*)

Subgroup	Outcome/Characteristic		Outcome/Characteristic	
Academic Year Emphases	Some earn high school credit		Some earn college credit	
	Yes	No	Yes	No
Support only	19 (3.50)	81 (3.50)	71 (8.50)	29 (8.50)
Remediation or remediation/support	64 (6.64)	36 (6.64)	92 (4.96)	8 (4.96)
Enrichment or enrichment/support	62 (5.87)	38 (5.87)	78 (5.03)	22 (5.03)
Several or no emphases	52 (6.47)	48 (6.47)	90 (2.53)	10 (2.53)
χ^2		46.52		7.54
Page #		72		72

Summer Emphases	Involve staff in developing courses		Hold workshops for staff		Discuss student performance with staff	
	≤once/year	>once/year	≤once/year	>once/year	≤once/year	>once/year
Support only	73 (6.22)	27 (6.22)	81 (5.05)	19 (5.05)	83 (4.36)	17 (4.36)
Remediation or remediation/support	100 (0)	0 (0)	100 (0)	0 (0)	37 (10.66)	63 (10.66)
Enrichment or enrichment/support	74 (5.14)	26 (5.14)	79 (6.09)	21 (6.09)	73 (3.74)	27 (3.74)
Several or no emphases	69 (8.34)	31 (8.34)	72 (8.55)	28 (8.55)	42 (6.22)	58 (6.22)
χ^2		17.97		13.98		33.28
Page #		79		79		79

TABLE C.4B (*continued*)

Subroup	Outcome/Characteristic		Outcome/Characteristic	
Academic Year Emphases	Send student evaluations to staff		Develop plans with staff to improve student performance	
	≤once/year	>once/year	≤once/year	>once/year
Support only	87 (7.01)	13 (7.01)	61 (7.67)	39 (7.67)
Remediation or remediation/support	61 (7.52)	39 (7.52)	26 (6.23)	74 (6.23)
Enrichment or enrichment/support	80 (4.45)	20 (4.45)	43 (7.63)	57 (7.63)
Several or no emphases	85 (4.66)	15 (4.66)	42 (5.84)	58 (5.84)
χ^2		7.78		10.68
Page #		79		79

SUPPORTING DOCUMENTATION: CHAPTER V

TABLE C.5A
SUPPORTING DOCUMENTATION

	Percentage of Full-Time Academic Year Staff with Higher Degrees (regression)			Percentage of Full-Time Summer Staff with Higher Degrees (regression)			Percentage of Full-Time Summer Staff Emplyed for 1 Summer/Year (regression)			Percentage of Full-Time Acad Year Staff Emplyed for 1 Summer/Year (regression)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	0.59	0.10	6.09	0.62	0.10	6.42	0.18	0.04	4.19	0.20	0.04	5.45
Location												
Rural	0.04	0.06	0.78	0.03	0.06	0.45	-0.06	0.04	-1.40	0.01	0.04	0.15
Host Type												
2-year	-0.02	0.04	-0.39	0.04	0.05	0.84	-0.08	0.04	-1.82	0.00	0.04	0.03
Size												
Small	-0.05	0.06	-0.82	-0.06	0.06	-0.98	0.10	0.04	2.12	0.01	0.04	0.27
Large	0.14	0.08	1.77	0.01	0.08	0.14	0.05	0.04	1.29	0.00	0.05	0.02
Race/Ethnicity												
Asian	-0.07	0.08	-0.88	-0.02	0.09	-0.26	0.09	0.06	1.44	0.02	0.05	0.31
Native America	-0.16	0.12	-1.27	-0.24	0.15	-1.64	0.12	0.05	2.28	-0.05	0.06	-0.74
Latino	-0.25	0.06	-3.91	-0.29	0.08	-3.41	0.14	0.06	2.32	0.14	0.04	3.16
White	-0.03	0.07	-0.44	-0.05	0.09	-0.51	0.09	0.04	2.11	0.07	0.05	1.47
Diverse	-0.10	0.12	-0.84	-0.08	0.06	-1.19	0.19	0.09	2.12	-0.09	0.04	-2.37
Years In Operation												
6-20	0.18	0.07	2.60	0.08	0.07	1.08	0.07	0.05	1.39	-0.01	0.05	-0.25
2-5	0.16	0.07	2.37	0.04	0.07	0.55	0.08	0.06	1.34	-0.12	0.04	-2.82
S_waite Adj DF		6.64			6.56			5.96			8.63	
S_waite F-stat		12.13			13.66			4.27			12.79	
Sample Size		179			178			178			179	
Page #		82			82			84			84	

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	Percentage of Part-Time Acad. Yr Staff Employed for 1 Summer/Year (regression)			Male Project Director (logit)			Student-Faculty Ratios (Academic Year, Including Tutors) (regression)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	0.22	0.05	4.21	-0.46	0.29	-1.60	17.93	1.58	11.37
Location									
Rural	-0.02	0.04	-0.38	0.18	0.37	0.48	0.15	1.24	0.12
Host Type									
2-year	-0.14	0.05	-2.96	0.16	0.33	0.50	0.61	0.94	0.65
Size									
Small	0.02	0.06	0.40	-0.09	0.32	-0.29	-3.03	1.32	-2.29
Large	-0.02	0.05	-0.49	0.22	0.28	0.76	-1.55	1.74	-0.89
Race/Ethnicity									
Asian	-0.04	0.08	-0.56	-1.20	0.60	-2.01	-1.76	1.33	-1.32
Native America	0.02	0.05	0.44	0.07	0.65	0.11	-5.05	1.63	-3.10
Latino	0.24	0.04	5.95	0.59	0.45	1.33	1.40	1.17	1.19
White	0.25	0.09	2.93	0.56	0.41	1.38	1.92	2.34	0.82
Diverse	0.12	0.06	1.94	-0.39	0.71	-0.56	-1.20	2.01	-0.60
Years In Operation									
6-20	0.12	0.06	2.08	-0.05	0.39	-0.13	-3.46	1.51	-2.30
2-5	0.23	0.06	3.88	0.19	0.39	0.48	-2.92	1.36	-2.14
S_waite Adj DF		5.98			7.45			5.18	
S_waite F-stat		18.23			2.95			40.80	
Sample Size		148						182	
Page #		84			90			97	

	Student-Faculty Ratios (Academic Year, Not Including Tutors) (regression)			Student-Faculty Ratios (Summer, Including Tutors) (regression)			Student-Faculty Ratios (Summer, Not Including Tutors) (regression)		
	b	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**	**b**	**se(b)**	**t-stat**
Intercept	28.29	5.17	5.47	4.61	0.22	21.24	15.82	5.57	2.84
Location									
Rural	-2.16	1.95	-1.10	-0.20	0.37	-0.54	-3.21	1.67	-1.92
Host Type									
2-year	-0.06	1.22	-0.05	1.02	0.33	3.13	1.88	0.68	2.77
Size									
Small	-3.14	1.92	-1.63	-0.10	0.33	-0.30	-1.64	1.66	-0.99
Large	-3.57	3.99	-0.89	0.15	0.39	0.39	-5.54	4.08	-1.36
Race/Ethnicity									
Asian	-5.75	2.94	-1.96	-1.01	0.36	-2.84	-6.08	2.99	-2.04
Native America	-8.56	2.81	-3.04	-0.83	0.39	-2.16	-3.32	2.51	-1.32
Latino	-0.48	2.30	-0.21	0.96	0.47	2.03	-1.08	1.82	-0.59
White	2.11	2.96	0.71	-0.45	0.38	-1.20	-2.32	2.52	-0.92
Diverse	-1.58	2.89	-0.55	-0.73	0.83	-0.89	-4.73	1.99	-2.38
Years In Operation									
6-20	-4.29	3.53	-1.22	0.07	0.27	0.24	-5.58	3.67	-1.52
2-5	-3.46	3.35	-1.03	-0.30	0.41	-0.71	-5.57	3.25	-1.72
S_waite Adj DF		6.18			6.31			5.51	
S_waite F-stat		22.25			16.24			2.80	
Sample Size		182			182			182	
Page #		97			99			99.00	

Contact with Director/Assistant Director
At Least Once a Week
(logit)

Contact with Counselors
More than Once a Week
(logit)

	b	se(b)	t-stat		b	se(b)	t-stat
Intercept	0.65	2.59	0.25	Intercept	-6.77	2.58	-2.62
Location				**Location**			
Rural	-0.95	0.37	-2.58	Rural	-0.01	0.31	-0.02
Host Type				**Host Type**			
2-year	-0.90	0.34	-2.65	2-year	0.58	0.32	1.82
Size				**Size**			
# funded slots	0.00	0.05	0.03	# funded slots	0.14	0.05	2.75
# funded slots sqd	-0.00	0.00	-0.17	# funded slots sqd	-0.00	0.00	-2.85
Race/Ethnicity				**Race/Ethnicity**			
Asian	-0.25	0.62	-0.40	Asian	1.08	0.88	1.22
Native American	-6.78	0.32	-21.03	Native American	0.98	0.84	1.17
Latino	0.40	0.41	0.96	Latino	-0.70	0.41	-1.72
White	-2.36	0.51	-4.59	White	-1.35	0.54	-2.50
Diverse	-1.45	0.58	-2.50	Diverse	0.69	0.61	1.13
Years In Operation				**Years In Operation**			
6-20	0.58	0.47	1.25	6-20	-0.54	0.46	-1.19
2-5	0.84	0.46	1.81	2-5	-0.15	0.48	-0.31
Staff-Student Ratio (Academic Year)				**Staff-Student Ratio (Academic Year)**			
ADMIN	-26.32	24.01	-1.10	COUNS	-5.08	8.16	-0.62
FADMIN	-0.12	22.12	-0.01	FCOUNS	17.40	13.35	1.30
OTHER1	4.28	1.53	2.79	COUNS2	-6.95	5.96	-1.17
FOTHER1	9.21	4.09	2.25	FCOUNS2	-58.34	36.84	-1.58
				OTHER2	3.07	1.32	2.34
				FOTHER2	2.65	2.74	0.97
		9.59				10.07	
		60.12				6.29	
		181				173	
		102				102	

ADMIN: Administrators
FADMIN: Full-time administrators
OTHER1: Non-Administrative staff
FOTHER1: Full-time non-administrative

COUNS: Counselor-student ratio
FCOUNS: Full-time counselor-student ratio
COUNS2: Teacher/counselor-student ratio
FCOUNS2: Full-time teacher/counselor-student ratio
OTHER2: Non-counseling staff-student ratio
FOTHER2: Full-time Non-counseling staff-student ratio

Contact with Instructors
At Least Once a Week
(logit)

	b	se(b)	t-stat
Intercept	-9.35	2.99	-3.13
Location			
Rural	-0.04	0.46	-0.08
Host Type			
2-year	-0.26	0.36	-0.72
Size			
# funded slots	0.19	0.06	3.23
# funded slots sqd	-0.00	0.00	-3.11
Race/Ethnicity			
Asian	-0.29	0.55	-0.54
Native American	-1.39	0.71	-1.96
Latino	-0.83	0.51	-1.64
White	-2.55	0.60	-4.26
Diverse	-0.76	0.60	-1.27
Years In Operation			
6-20	0.03	0.50	0.06
2-5	0.90	0.64	1.42
Staff-Student Ratio (Academic Year)			
TEACH	26.45	4.83	5.48
FTEACH	-5.14	13.59	-0.38
COUNS2	22.08	7.90	2.79
FCOUNS2	40.19	36.57	1.10
OTHER3	1.04	1.64	0.63
FOTHER3	6.95	6.13	1.13
S_waite Adj DF		13.80	
S_waite F-stat		15.92	
Sample Size		151	
Page #		102	

TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

Contact with Tutors
More Than Once a Week
(logit)

	b	se(b)	t-stat
Intercept	-1.30	2.56	-0.51
Location			
Rural	-0.33	0.37	-0.89
Host Type			
2-year	0.42	0.40	1.06
Size			
# funded slots	0.01	0.05	0.25
# funded slots sqd	-0.00	0.00	-0.22
Race/Ethnicity			
Asian	0.48	0.76	0.64
Native American	0.89	0.98	0.91
Latino	0.03	0.56	0.06
White	-1.61	0.45	-3.60
Diverse	-1.39	0.61	-2.27
Years In Operation			
6-20	-0.51	0.42	-1.22
2-5	1.01	0.51	1.98
Staff-Student Ratio (Academic Year)			
TUTOR	7.15	3.02	2.36
FTUTOR	1.02	3.76	0.27
OTHER4	-5.33	3.18	-1.68
FOTHER4	14.80	5.06	2.92
		11.55	
		11.08	
		177	
		102	

TUTOR: Tutor-student ratio
FTUTOR: Full-time tutor-student ratio
OTHER4: Regular staff-student ratio
OTHER4: Full-time regular staff-student ratio

Summer, Frequent Small
Group Instruction
(logit)

	b	se(b)	t-stat
Intercept	4.97	2.59	1.92
Location			
Rural	-0.74	0.43	-1.73
Host Type			
2-year	-0.30	0.43	-0.70
Size			
# funded slots	-0.04	0.05	-0.83
# funded slots sqd	0.00	0.00	0.78
Race/Ethnicity			
Asian	-0.39	0.82	-0.48
Native American	-0.29	1.18	-0.25
Latino	1.01	0.50	2.00
White	0.16	0.53	0.30
Diverse	6.01	0.80	7.50
Years In Operation			
6-20	-0.63	0.47	-1.33
2-5	-0.56	0.60	-0.93
Staff-Student Ratio (Summer)			
COUNS2S	9.67	7.65	1.26
FCOUNS2S	1.10	7.15	0.15
TEACHS	1.53	3.70	0.41
FTEACHS	-1.71	3.10	-0.55
OTHER3S	-3.07	1.53	-2.00
FOTHER3S	-1.35	3.22	-0.42
		12.51	
		28.61	
		180	
		103	

COUNS2S: Teacher/counselor-student ratio
FCOUNS2S: F-T Teacher/counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

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Academic Year, Frequent
Small Group Instruction
(logit)

	b	se(b)	t-stat
Intercept	0.64	2.91	0.22
Location			
Rural	-1.01	0.35	-2.93
Host Type			
2-year	0.38	0.48	0.80
Size			
# funded slots	-0.03	0.07	-0.39
# funded slots sqd	0.00	0.00	0.67
Race/Ethnicity			
Asian	-2.03	0.71	-2.85
Native American	0.80	0.79	1.02
Latino	1.04	0.66	1.57
White	-0.13	0.56	-0.23
Diverse	-0.84	0.74	-1.14
Years In Operation			
6-20	0.46	0.48	0.96
2-5	1.17	0.68	1.73
Staff-Student Ratio (Academic Year)			
COUNS2	-19.33	6.06	-3.19
FCOUNS2	163.37	63.30	2.58
TEACH	21.66	5.83	3.72
FTEACH	-3.57	9.33	-0.38
OTHER3	-2.75	2.04	-1.35
FOTHER3	7.58	3.29	2.31
S_waite Adj DF		10.39	
S_waite F-stat		10.58	
Sample Size		182	
Page #		103	

COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

Summer, Frequent Lectures
(logit)

	b	se(b)	t-stat
Intercept	3.76	2.14	1.76
Location			
Rural	-0.88	0.32	-2.80
Host Type			
2-year	0.45	0.35	1.31
Size			
# funded slots	-0.04	0.04	-0.97
# funded slots sqd	0.00	0.00	0.62
Race/Ethnicity			
Asian	-0.37	0.58	-0.64
Native American	0.00	0.62	0.00
Latino	0.72	0.47	1.56
White	-0.87	0.41	-2.10
Diverse	0.24	0.53	0.46
Years In Operation			
6-20	0.41	0.38	1.08
2-5	-0.76	0.48	-1.59
Staff-Student Ratio (Summer)			
COUNS2S	-14.88	5.66	-2.63
FCOUNS2S	21.65	6.48	3.34
TEACHS	2.25	2.24	1.00
FTEACHS	-6.06	2.27	-2.67
OTHER3S	0.32	1.27	0.25
FOTHER3S	-6.05	2.43	-2.49
		11.09	
		7.55	
		180	
		103	

COUNS2S: Teacher/Counselor-student ratio
FCOUNS2S: F-T Teacher/Counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

Academic Year,
Frequent Lectures
(logit)

	b	se(b)	t-stat
Intercept	2.86	2.34	1.22
Location			
Rural	-0.67	0.37	-1.82
Host Type			
2-year	-0.11	0.33	-0.33
Size			
# funded slots	-0.06	0.05	-1.33
# funded slots sqd	0.00	0.00	1.09
Race/Ethnicity			
Asian	-2.37	0.39	-6.01
Native American	0.57	0.69	0.83
Latino	0.65	0.45	1.46
White	-0.17	0.55	-0.32
Diverse	-0.05	0.52	-0.10
Years In Operation			
6-20	0.57	0.42	1.35
2-5	0.32	0.51	0.63
Staff-Student Ratio (Academic Year)			
COUNS2	-0.07	4.43	-0.02
FCOUNS2	-162.03	37.41	-4.33
TEACH	17.01	4.76	3.57
FTEACH	18.81	7.29	2.58
OTHER3	0.61	1.62	0.38
FOTHER3	-8.31	4.32	-1.93
		10.95	
		15.92	
		178	
		103	

COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

	Summer, Frequent Individualized Instruction (logit)				Academic Year, Frequent Individualized Instruction (logit)				Summer, Frequent Computer-Based Instruction (logit)		
	b	se(b)	t-stat		b	se(b)	t-stat		b	se(b)	t-stat
Intercept	5.98	1.86	3.21	Intercept	2.77	1.95	1.42	Intercept	-6.67	2.48	-2.69
Location				**Location**				**Location**			
Rural	0.58	0.35	1.64	Rural	0.68	0.37	1.84	Rural	-0.07	0.35	-0.20
Host Type				**Host Type**				**Host Type**			
2-year	0.77	0.37	2.05	2-year	0.60	0.33	1.81	2-year	1.04	0.37	2.81
Size				**Size**				**Size**			
# funded slots	-0.15	0.04	-3.54	# funded slots	-0.09	0.04	-2.08	# funded slots	0.07	0.05	1.46
# funded slots sqd	0.00	0.00	3.44	# funded slots sqd	0.00	0.00	1.84	# funded slots sqd	-0.00	0.00	-1.06
Race/Ethnicity				**Race/Ethnicity**				**Race/Ethnicity**			
Asian	-0.23	0.71	-0.32	Asian	-0.20	0.54	-0.38	Asian	1.37	0.61	2.24
Native American	-1.35	0.64	-2.10	Native American	-1.10	0.78	-1.41	Native American	-0.21	0.85	-0.25
Latino	0.68	0.47	1.46	Latino	-0.22	0.53	-0.42	Latino	0.82	0.50	1.64
White	-0.85	0.45	-1.91	White	-0.68	0.43	-1.56	White	0.51	0.49	1.04
Diverse	0.21	0.55	0.37	Diverse	-0.09	0.64	-0.13	Diverse	0.75	0.79	0.95
Years In Operation				**Years In Operation**				**Years In Operation**			
6-20	-0.70	0.43	-1.64	6-20	-0.42	0.43	-0.98	6-20	1.23	0.41	2.99
2-5	-0.77	0.50	-1.56	2-5	-0.59	0.45	-1.33	2-5	1.52	0.62	2.46
Staff-Student Ratio (Summer)				**Staff-Student Ratio (Academic Year)**				**Staff-Student Ratio (Summer)**			
COUNS2S	-17.32	7.62	-2.27	COUNS2	-2.92	4.30	-0.68	COUNS2S	-8.53	4.89	-1.74
FCOUNS2S	34.18	7.07	4.83	FCOUNS2	57.49	43.47	1.32	FCOUNS2S	12.69	6.24	2.03
TEACHS	-6.18	3.82	-1.62	TEACH	9.01	4.44	2.03	TEACHS	-3.09	3.19	-0.97
FTEACHS	-0.41	2.59	-0.16	FTEACH	-3.20	6.94	-0.46	FTEACHS	5.27	2.85	1.85
OTHER3S	0.20	1.21	0.17	OTHER3	0.76	1.35	0.56	OTHER3S	-3.64	1.61	-2.26
FOTHER3S	5.08	2.51	2.02	FOTHER3	0.04	3.88	0.01	FOTHER3S	3.76	3.06	1.23
S_waite Adj DF		9.82				10.39				9.19	
S_waite F-stat		8.60				5.63				6.13	
Sample Size		181				180				180	
Page #		103				103				103	

COUNS2S: Teacher/Counselor-student ratio
FCOUNS2S: F-T Teacher/Counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

COUNS2S: Teacher/Counselor-student ratio
FCOUNS2S: F-T Teacher/Counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

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	Academic Year, Frequent Computer-Based Instruction (logit)				Summer, Frequent Independent Study (logit)				Academic Year, Frequent Independent Study (logit)		
	b	se(b)	t-stat		b	se(b)	t-stat		b	se(b)	t-stat
Intercept	-5.19	2.73	-1.90	Intercept	0.61	2.43	0.25	Intercept	-3.47	2.81	-1.24
Location				**Location**				**Location**			
Rural	0.05	0.39	0.13	Rural	-0.71	0.54	-1.32	Rural	1.01	0.56	1.78
Host Type				**Host Type**				**Host Type**			
2-year	0.85	0.38	2.23	2-year	-0.06	0.43	-0.15	2-year	0.64	0.57	1.13
Size				**Size**				**Size**			
# funded slots	0.03	0.05	0.57	# funded slots	-0.06	0.05	-1.27	# funded slots	-0.01	0.06	-0.16
# funded slots sqd	-0.00	0.00	-0.35	# funded slots sqd	0.00	0.00	1.42	# funded slots sqd	0.00	0.00	0.07
Race/Ethnicity				**Race/Ethnicity**				**Race/Ethnicity**			
Asian	0.78	0.56	1.40	Asian	0.31	0.69	0.45	Asian	-5.85	0.39	-15.10
Native American	-5.21	0.47	-11.20	Native American	1.05	1.27	0.83	Native American	-6.33	0.58	-10.84
Latino	0.20	0.45	0.44	Latino	0.61	0.48	1.26	Latino	-0.27	0.89	-0.30
White	-0.34	0.53	-0.63	White	1.09	0.68	1.60	White	-0.01	0.63	-0.01
Diverse	0.91	0.68	1.34	Diverse	2.69	0.58	4.63	Diverse	3.52	0.66	5.33
Years in Operation				**Years in Operation**				**Years in Operation**			
6-20	0.76	0.40	1.92	6-20	0.15	0.47	0.31	6-20	-1.15	0.47	-2.44
2-5	0.51	0.50	1.02	2-5	-0.04	0.61	-0.06	2-5	-2.87	0.76	-3.78
Staff-Student Ratio (Academic Year)				**Staff-Student Ratio (Summer)**				**Staff-Student Ratio (Academic Year)**			
COUNS2	5.09	4.04	1.26	COUNS2S	2.49	5.22	0.48	COUNS2	1.12	4.32	0.26
FCOUNS2	-159.97	21.11	-7.58	FCOUNS2S	-15.82	9.53	-1.66	FCOUNS2	-506.75	36.93	-13.72
TEACH	9.85	3.24	3.04	TEACHS	-2.80	2.57	-1.09	TEACH	15.58	2.89	5.39
FTEACH	6.49	6.71	0.97	FTEACHS	5.38	2.41	2.24	FTEACH	13.43	5.87	2.29
OTHER3	-1.50	1.81	-0.83	OTHER3S	1.07	1.03	1.04	OTHER3	3.66	1.80	2.03
FOTHER3	7.68	3.91	1.97	FOTHER3S	1.60	2.99	0.54	FOTHER3	-0.14	4.08	-0.03
S_waite Adj DF		13.84				9.57				7.77	
S_waite F-stat		30.97				12.73				105.14	
Sample Size		180				181				179	
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COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

COUNS2S: Teacher/Counselor-student ratio
FCOUNS2S: F-T Teacher/Counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

	Summer, Frequent Lab Work (logit)				Academic Year, Frequent Lab Work (logit)				Summer, Frequent Homework Assignments (logit)		
	b	se(b)	t-stat		b	se(b)	t-stat		b	se(b)	t-stat
Intercept	3.48	2.62	1.33	Intercept	3.99	2.36	1.69	Intercept	7.76	2.35	3.30
Location				**Location**				**Location**			
Rural	0.57	0.36	1.57	Rural	0.15	0.44	0.35	Rural	-0.98	0.28	-3.51
Host Type				**Host Type**				**Host Type**			
2-year	0.13	0.30	0.44	2-year	0.52	0.41	1.26	2-year	0.48	0.33	1.45
Size				**Size**				**Size**			
# funded slots	-0.11	0.06	-1.83	# funded slots	-0.12	0.05	-2.26	# funded slots	-0.15	0.05	-2.93
# funded slots sqd	0.00	0.00	2.12	# funded slots sqd	0.00	0.00	2.09	# funded slots sqd	0.00	0.00	3.00
Race/Ethnicity				**Race/Ethnicity**				**Race/Ethnicity**			
Asian	0.61	0.55	1.11	Asian	-0.61	0.91	-0.68	Asian	-0.27	0.63	-0.43
Native American	0.90	0.73	1.24	Native American	-6.29	0.59	-10.67	Native American	0.29	0.68	0.43
Latino	0.18	0.50	0.37	Latino	-0.59	0.53	-1.12	Latino	-0.78	0.45	-1.72
White	0.24	0.53	0.46	White	-2.73	0.69	-3.95	White	-1.05	0.45	-2.34
Diverse	1.30	0.52	2.49	Diverse	0.04	0.74	0.05	Diverse	-0.21	0.56	-0.38
Years In Operation				**Years In Operation**				**Years In Operation**			
6-20	0.23	0.37	0.61	6-20	-0.30	0.70	-0.43	6-20	-0.46	0.40	-1.16
2-5	-0.41	0.38	-1.07	2-5	-1.53	0.73	-2.10	2-5	-1.14	0.41	-2.75
Staff-Student Ratio	**(Summer)**			**Staff-Student Ratio**	**(Academic**	**Year)**		**Staff-Student Ratio**	**(Summer)**		
COUNS2S	7.49	8.72	0.86	COUNS2	0.05	11.08	0.00	COUNS2S	0.23	6.72	0.03
FCOUNS2S	-9.80	8.49	-1.15	FCOUNS2	-469.56	28.57	-16.43	FCOUNS2S	6.28	7.17	0.88
TEACHS	1.89	3.11	0.61	TEACH	5.41	7.96	0.68	TEACHS	3.50	2.77	1.26
FTEACHS	2.79	2.61	1.07	FTEACH	10.60	6.29	1.69	FTEACHS	5.74	2.87	2.00
OTHER3S	0.83	1.44	0.57	OTHER3	-0.47	1.82	-0.26	OTHER3S	2.53	1.78	1.42
FOTHER3S	-5.97	2.54	-2.35	FOTHER3	-3.12	4.86	-0.64	FOTHER3S	-1.04	3.13	-0.33
S_waite Adj DF		10.84				7.92				12.66	
S_waite F-stat		6.36				22.22				12.08	
Sample Size		181				180				181	
Page #		103				103				103	

COUNS2S: Teacher/Counselor-student ratio
FCOUNS2S: F-T Teacher/Counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

COUNS2S: Teacher/Counselor-student ratio
FCOUNS2S: F-T Teacher/Counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

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Academic Year, Frequent
Homework Assignments
(logit)

	b	se(b)	t-stat
Intercept	3.48	2.62	1.33
Location			
Rural	-0.04	0.33	-0.12
Host Type			
2-year	-0.05	0.44	-0.12
Size			
# funded slots	-0.13	0.05	-2.40
# funded slots sqd	0.00	0.00	2.62
Race/Ethnicity			
Asian	-1.19	0.77	-1.55
Native American	0.93	0.79	1.18
Latino	-0.67	0.69	-0.97
White	-1.31	0.48	-2.71
Diverse	-0.07	0.59	-0.12
Years In Operation			
6-20	0.19	0.43	0.44
2-5	-0.01	0.58	-0.02
Staff-Student Ratio (Academic Year)			
COUNS2	6.51	5.45	1.19
FCOUNS2	-14.02	38.59	-0.36
TEACH	12.84	2.55	5.04
FTEACH	13.23	6.86	1.93
OTHER3	3.86	2.39	1.62
FOTHER3	-0.37	3.99	-0.09
S_waite Adj DF		12.26	
S_waite F-stat		16.43	
Sample Size		181	
Page #		103	

COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

Summer, Frequent
Team Teaching
(logit)

	b	se(b)	t-stat
Intercept	-1.28	2.64	-0.48
Location			
Rural	0.52	0.37	1.40
Host Type			
2-year	-0.52	0.37	-1.43
Size			
# funded slots	-0.02	0.06	-0.28
# funded slots sqd	0.00	0.00	0.17
Race/Ethnicity			
Asian	-0.73	0.57	-1.28
Native American	-1.30	0.77	-1.70
Latino	-0.03	0.56	-0.05
White	-0.18	0.60	-0.30
Diverse	0.83	0.49	1.70
Years In Operation			
6-20	1.21	0.42	2.91
2-5	0.78	0.51	1.54
Staff-Student Ratio (Summer)			
COUNS2S	6.59	4.16	1.58
FCOUNS2S	-1.33	5.21	-0.26
TEACHS	1.91	2.11	0.91
FTEACHS	5.98	2.20	2.72
OTHER3S	0.68	1.27	0.53
FOTHER3S	-0.33	2.77	-0.12
		10.08	
		5.17	
		181	
		103	

COUNS2S: Teacher/Counselor-student ratio
FCOUNS2S: F-T Teacher/Counselor-student ratio
TEACHS: Teacher-student ratio
FTEACHS: Full-time teacher-student ratio
OTHER3S: Non-teaching staff-student ratio
FOTHER3S: F-T Non-teaching staff-student ratio

Academic Year, Frequent
Team Teaching
(logit)

	b	se(b)	t-stat
Intercept	0.21	3.52	0.06
Location			
Rural	0.20	0.36	0.55
Host Type			
2-year	0.19	0.38	0.51
Size			
# funded slots	-0.08	0.07	-1.03
# funded slots sqd	0.00	0.00	0.95
Race/Ethnicity			
Asian	-0.01	0.79	-0.01
Native American	-5.45	0.46	-11.85
Latino	-0.47	0.71	-0.67
White	-1.52	0.58	-2.63
Diverse	-0.65	0.87	-0.76
Years In Operation			
6-20	1.27908	0.50066	2.55479
2-5	0.26338	0.52852	0.49835
Staff-Student Ratio (Academic Year)			
COUNS2	-11.5256	6.99176	-1.64845
FCOUNS2	-9.95993	50.86059	-0.19583
TEACH	9.00122	3.0211	2.97945
FTEACH	-10.5218	6.58564	-1.59769
OTHER3	6.72822	2.59867	2.5891
FOTHER3	2.92534	4.18671	0.69872
		11.75	
		22.06	
		179	
		103	

COUNS2: Teacher/Counselor-student ratio
FCOUNS2: F-T Teacher/Counselor-student ratio
TEACH: Teacher-student ratio
FTEACH: Full-time teacher-student ratio
OTHER3: Non-teaching staff-student ratio
FOTHER3: F-T Non-teaching staff-student ratio

SUPPORTING DOCUMENTATION: CHAPTER VI

TABLE C.6A
SUPPORTING DOCUMENTATION: CHAPTER III
LOGITS AND REGRESSIONS

	Admit 11th Graders (logit)			Admit New Students In Both Summer and Academic Year (logit)			Reach Many Students and Screen Later (logit)		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	-0.31	0.32	-0.95	-1.94	0.33	-5.90	1.05	0.33	3.22
Location									
Rural	0.04	0.37	0.11	0.36	0.32	1.14	0.59	0.39	1.53
Host Type									
2-year	0.81	0.33	2.48	-0.36	0.31	-1.17	-0.73	0.32	-2.25
Size									
Small	0.69	0.36	1.91	0.45	0.36	1.23	-0.03	0.33	-0.10
Large	0.52	0.43	1.20	1.78	0.34	5.24	-1.41	0.30	-4.71
Race/Ethnicity									
Asian	1.14	0.56	2.01	1.33	0.61	2.18	-0.58	0.71	-0.82
Native America	1.27	0.59	2.16	1.29	0.64	2.03	-1.25	0.70	-1.79
Latino	0.18	0.45	0.39	0.29	0.49	0.60	-0.61	0.44	-1.37
White	0.51	0.38	1.36	0.74	0.41	1.79	-0.44	0.43	-1.03
Diverse	-1.01	0.66	-1.53	1.96	0.51	3.88	-1.54	0.57	-2.70
Years in Operation									
6-20	-0.10	0.31	-0.33	0.12	0.39	0.30	0.57	0.40	1.42
2-5	-1.08	0.42	-2.59	0.99	0.46	2.15	0.48	0.38	1.27
S_waite Adj DF		7.94			9.11			8.95	
S_waite F-stat		8.02			20.45			18.68	
Sample Size		182			182			173	
Page #		108			108			111	

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Number of Applicants
(regression)

	b	se(b)	t-stat
Intercept	94.03	12.14	7.74
Small Project	-41.93	12.86	-3.26
Large Project	20.92	15.36	1.36
S_waite Adj DF		1.72	
S_waite F-stat		13.29	
Sample Size		182	
Page #		111	

Open Slots Per Applicant
(Enrollment Rate)
(regression)

	b	se(b)	t-stat
Intercept	0.38	0.04	9.59
Small Project	-0.03	0.06	-0.44
Large Project	0.02	0.06	0.26
S_waite Adj DF		1.85	
S_waite F-stat		0.17	
Sample Size		156	
Page #		113	

Applicants Per Open Slot
(regression)

	b	se(b)	t-stat
Intercept	-1.53	2.01	-0.76
# of Recruiting Techniques	1.25	0.38	3.32
S_waite Adj DF		1.00	
S_waite F-stat		10.99	
Sample Size		155	
Page #		113	

Applicants Per Open Slot
(regression)

	b	se(b)	t-stat
Intercept	3.31	0.32	10.26
6+ Recruiting Techniques	4.34	1.13	3.86
S_waite Adj DF		1.00	
S_waite F-stat		14.89	
Sample Size		155	
Page #		113	

Applicants Per Open Slot
(regression)

	b	se(b)	t-stat
Intercept	3.78	1.91	1.98
Assembly Presentations In Schools	-1.03	2.39	-0.43
Programs at Community Organizations	5.32	1.07	4.97
S_waite Adj DF		1.76	
S_waite F-stat		21.68	
Sample Size		155	
Page #		113	

More Than One-Quarter of
Applicants Are Male
(logit)

	b	se(b)	t-stat
Intercept	0.46	0.51	0.91
Male Director	0.00	0.39	0.01
Proportion of Summer Staff Male	0.94	0.98	0.96
Proportion of Acad Yr Staff Male	0.07	0.86	0.08
S_waite Adj DF		2.68	
S_waite F-stat		0.40	
Sample Size		181	
Page #		114	

More Than One-Quarter of Applicants Are Male (logit)

Intercept	0.38	0.45	0.86
Location			
Rural	-0.11	0.47	-0.24
Host Type			
2-year	0.24	0.35	0.68
Size			
Small	-0.26	0.43	-0.61
Large	0.51	0.48	1.06
Race/Ethnicity			
Asian	1.42	0.61	2.32
Native American	-1.02	0.54	-1.89
Latino Project	1.81	0.43	4.25
White	0.99	0.68	1.45
Diverse	1.99	0.89	2.23
Years In Operation			
6-20	0.17	0.53	0.32
2-5	-0.27	0.46	-0.59
S_waite Adj DF		6.09	
S_waite F-stat		4.77	
Sample Size		182	
Page #		114	

Number of Applicants (regression)

Intercept	17.34	0.66	26.34
Low Achievement Or Test Scores	-7.78	0.65	-12.03
Behavioral Problems	-6.88	0.67	-10.34
S_waite Adj DF		1.82	
S_waite F-stat		97.24	
Sample Size		182	
Page #		123	

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TABLE C.6B

SUPPORTING DOCUMENTATION: CHAPTER VI
CHI-SQUARE TESTS

Subgroup	Outcome/Characteristic	
Recruiting Techniques Used	Applicants Per Open Slot	
	≥4	<4
Assemblies	44 (5.60)	56 (5.60)
No assemblies	21 (4.30)	79 (4.30)
χ^2		7.26
Page #		113
Recruiting Techniques Used	Applicants Per Open Slot	
	≥4	<4
Presentations at community organizations	47 (5.78)	53 (5.78)
No presentations at community organizations	21 (4.30)	79 (4.30)
χ^2		12.08
Page #		113

Table C.6B *(continued)*

Subgroup	Outcome/Characteristic		Outcome/Characteristic	
Admission Policy	Any 8th grade applicants		More than one-quarter of applicants are 8th graders	
	Yes	No	Yes	No
Admit 8th graders	87 (4.03)	13 (4.03)	44 (11.11)	56 (11.11)
Do not admit 8th graders	29 (4.59)	71 (4.59)	8 (3.15)	92 (3.15)
χ^2		38.46		8.34
Page #		116		116

Subgroup	Outcome/Characteristic		Outcome/Characteristic	
Admission Policy	Any 11th grade applicants		More than one-quarter of applicants are 11th graders	
	Yes	No	Yes	No
Admit 11th graders	98 (1.20)	2 (1.20)	24 (3.10)	76 (3.10
Do not admit 11th graders	66 (6.15)	34 (6.15)	11 (2.73)	89 (2.73)
χ^2		25.40		8.91
Page #		116		116

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Table C.6B *(continued)*

Subgroup	Outcome/Characteristic	
Race/ethnicity	Any African American applicants	
	Yes	No
Latino	64 (8.24)	36 (8.24)
Not Latino	92 (2.74)	8 (2.74)
χ^2		6.84
Page #		116

SUPPORTING DOCUMENTATION: CHAPTER VII

APPENDIX TABLE VII.1

NONRESPONSE PERCENTAGES[1] FOR ITEMS REFERRED TO IN THE TEXT

Page Number	Description of Statistic	Nonresponse Rate (Percent)
134	Grades when students drop out of Upward Bound	0.5
134	Season when students drop out of Upward Bound	0.0
136	Importance of employment in dropout decisions	0.0
136	Share of projects offering work experience programs	3.8
136	Importance of employment in dropout decisions for projects offering work experience programs	0.0
136	Importance of extracurricular activities in dropout decisions	0.0
136	Importance of being asked to leave in dropout decisions	0.0
139	Importance of Upward Bound attendance for continuation in the program	3.8
139	Importance of target school attendance for continuation in the program	3.8
139	Importance of Upward Bound academic performance for continuation in the program	3.8
139	Importance of target school academic performance for continuation in the program	3.8
139	Importance of Upward Bound discipline record for continuation in the program	3.8
139	Importance of target school discipline record for continuation in the program	3.8
139	Number of student performance emphases	3.8
143	Upward Bound dropout rate	24.7
146	Where Upward Bound graduates go	1.6
150	Number of Upward Bound graduates attending the host institution	1.1
150	Share of Upward Bound graduates attending the host institution	3.3

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[1] The nonresponse percentage is the percentage of observations (out of 182 regular grantees in the grantee survey) with invalid or missing responses.

APPENDIX TABLE VII.2

LOGIT ANALYSIS OF MISSING OBSERVATIONS FOR DROPOUT RATE VARIABLE

(Dependent Variable: Failure to Provide Valid Information for Calculation of Dropout Rate)

Independent Variable	b	se(b)	t-statistic
Intercept	-1.14	0.37	-3.09
Rural Setting	-0.78	0.33	-2.36
2-Year Host Institution	-0.45	0.38	-0.69
60 or Fewer Students	-0.45	0.46	-0.97
100 or More Students	-0.02	0.40	-0.05
Mixed Ethnicity Project	-1.58	0.57	-2.76
>= 25 % Asian Students	-6.19	0.34	-18.07
>= 50 % Native American	0.87	0.76	1.15
>= 50 % Latino Students	0.21	0.44	0.49
>= 50 % White Students	0.26	0.42	0.62
Project Age Unclear	8.36	0.35	24.03
Project 2-5 Years Old	0.59	0.54	1.10
Projects 6-20 Years Old	0.53	0.43	1.24
Number of Observations	182		
Multiple R-Square	0.0709		

For large samples, t-statistics greater than 1.96 indicate significance at the .05 level.

APPENDIX TABLE VII.3

SIGNIFICANCE TESTS REFERRED TO IN THE TEXT

Page #	Variable	Groups for which Difference-of-Means was Calculated and Tested	b	se(b)	t-stat.
139	# of performance standards	projects with math-science focus vs. projects with a foundational focus	0.63	0.30	2.06
139	# of performance standards	projects with math-science focus vs. projects with a structured focus	0.82	0.31	2.66
139	# of performance standards	projects with math-science focus vs. projects with an unstructured focus	0.69	0.30	2.30
145	dropout rate	projects w. year-round (vs. part-year) work experience programs	-8.02	4.11	-1.95
145	dropout rate	projects with math-science focus vs. projects with an unstructured focus	9.32	4.68	1.99
146	overall college attendance rate	6 to 20 year-old projects vs. 2 to 5 year-old projects	11.24	4.95	2.27
146	overall college attendance rate	6 to 20 year-old projects vs. projects over 20 years old	5.62	1.84	3.06
146	overall college attendance rate	projects with 5 to 6 (vs. 3 to 4) student performance emphases	5.73	2.92	1.96
148	two-year college attendance rate	projects at two-year host institutions vs. projects at four-year hosts	29.29	3.38	8.68
148	four-year college attendance rate	projects at four-year host institutions vs. projects at two-year hosts	34.67	4.24	8.18
148	four-year college attendance rate	projects with at least 100 students vs. projects with under 61 students	19.43	2.79	6.97
148	four-year college attendance rate	projects with at least 100 students vs. projects with 61 to 99 students	8.41	3.20	2.63
150	attendance rate at host institution	rural projects vs. urban projects	10.94	4.14	2.65
150	attendance rate at host institution	projects with part-year (vs. year-round) work experience programs	11.46	4.36	2.63

For large samples, t-statistics greater than 1.96 indicate significance at the .05 level.

APPENDIX TABLE VII.4

NUMBER OF PERFORMANCE EMPHASES[1], BY PROJECT TYPE

(standard deviations and sample sizes provided)

Type of Project	Average Number of Emphases		
	Mean	Std. Dev.	Sample N
Rural	4.14	0.21	59
Urban	4.16	0.19	116
Based at four-year host institutions	4.25	0.17	125
Based at two-year host institutions	3.73	0.21	50
Small (no more than 60 students)	4.11	0.13	38
Medium (61-99 students)	4.12	0.19	89
Large (over 100 students)	4.25	0.19	48
Young (2 to 5 years old)	4.52	0.20	33
Middle-aged (6 to 20 years old)	4.14	0.28	59
Mature (over 20 years old)	4.04	0.20	82
Math/science focus	4.57	0.25	58
Foundational focus	3.94	0.17	53
Structured focus	3.74	0.18	28
Unstructured focus	3.88	0.16	30
No work experience	4.10	0.20	87
Part-year work experience	4.07	0.28	54
Year-round work experience	4.48	0.17	27
Resid. nonbridge summer program	4.19	0.15	147
No res. nonbridge summer program	3.92	0.17	27
All projects	**4.15**	**0.12**	**175**

[1] The number of performance emphases is the number of factors considered "very important" for students' continuation in the Upward Bound program (minimum = 0, maximum = 6).

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APPENDIX TABLE VII.5

AVERAGE DROPOUT RATES[1] FROM UPWARD BOUND PROGRAMS, BY PROJECT TYPE

(standard deviations and sample sizes provided)

Type of Project	Average Number of Emphases		
	Mean	Std. Dev.	Sample N
Rural	17.8 %	3.1	49
Urban	20.4	2.2	88
Based at four-year host institutions	19.1	2.1	95
Based at two-year host institutions	21.0	2.1	42
Small (no more than 60 students)	21.0	1.3	30
Medium (61-99 students)	18.1	2.0	71
Large (over 100 students)	21.5	2.5	36
Young (2 to 5 years old)	16.8	2.0	28
Middle-aged (6 to 20 years old)	19.3	1.4	44
Mature (over 20 years old)	20.3	3.0	65
Math/science focus	24.4	3.6	41
Foundational focus	16.5	1.9	42
Structured focus	21.0	1.2	23
Unstructured focus	15.0	3.0	27
No work experience	17.4	2.5	67
Part-year work experience	24.6	3.7	44
Year-round work experience	16.6	1.9	20
Resid. nonbridge summer program	19.4	1.9	113
No res. nonbridge summer program	20.5	3.4	23
0-2 student performance emphases	17.9	3.3	29
3-4 student performance emphases	19.5	1.9	51
5-6 student performance emphases	20.5	3.1	56
All projects	**19.5**	**1.5**	**137**

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[1] The dropout rate equals the percentage of students from the 1991-92 program that neither graduated from high school nor returned to Upward Bound by the fall of 1992.

APPENDIX TABLE VII.6

TWO-YEAR COLLEGE ATTENDANCE RATES[1], BY PROJECT TYPE

(standard deviations and sample sizes provided)

Type of Project	Two-Year College Attendance Rate		
	Mean	Std. Dev.	Sample N
Rural	22.9 %	2.2	62
Urban	18.4	1.9	117
Based at four-year host institutions	14.3	1.7	126
Based at two-year host institutions	43.6	2.9	53
Small (no more than 60 students)	30.0	1.9	39
Medium (61-99 students)	18.8	1.6	92
Large (over 100 students)	13.7	1.4	48
Young (2 to 5 years old)	33.0	3.6	33
Middle-aged (6 to 20 years old)	22.7	3.4	61
Mature (over 20 years old)	15.1	1.8	84
Math/science focus	16.8	2.9	59
Foundational focus	20.7	1.9	54
Structured focus	24.6	1.8	29
Unstructured focus	21.2	2.1	29
No work experience	22.8	2.3	88
Part-year work experience	16.5	2.4	57
Year-round work experience	18.7	1.1	27
Resid. nonbridge summer program	19.0	1.5	150
No res. nonbridge summer program	25.4	2.2	28
0-2 student performance emphases	27.9	1.6	34
3-4 student performance emphases	18.0	1.7	66
5-6 student performance emphases	17.8	2.9	72
All projects	**20.0**	**1.3**	**179**

[1] The two-year college attendance rate is the average share of an Upward Bound project's graduates that attends a two-year college following graduation.

APPENDIX TABLE VII.7

FOUR-YEAR COLLEGE ATTENDANCE RATES[1], BY PROJECT TYPE

(standard deviations and sample sizes provided)

Type of Project	Four-Year College Attendance Rate		
	Mean	Std. Dev.	Sample N
Rural	58.0 %	3.9	62
Urban	70.5	2.4	117
Based at four-year host institutions	72.9	2.4	126
Based at two-year host institutions	38.2	3.5	53
Small (no more than 60 students)	55.5	2.1	39
Medium (61-99 students)	66.6	2.6	92
Large (over 100 students)	75.0	1.9	48
Young (2 to 5 years old)	46.5	4.1	33
Middle-aged (6 to 20 years old)	68.1	4.4	61
Mature (over 20 years old)	70.0	2.8	84
Math/science focus	71.8	4.4	59
Foundational focus	64.5	2.3	54
Structured focus	61.0	2.7	29
Unstructured focus	62.3	2.9	29
No work experience	61.1	3.5	88
Part-year work experience	71.4	2.7	57
Year-round work experience	72.1	1.4	27
Resid. nonbridge summer program	66.8	2.3	150
No res. nonbridge summer program	64.3	2.9	28
0-2 student performance emphases	58.3	2.5	34
3-4 student performance emphases	64.7	2.9	66
5-6 student performance emphases	70.6	4.5	72
All projects	**66.2**	**1.8**	**179**

[1] The four-year college attendance rate is the average share of an Upward Bound project's graduates that attends a four-year college following graduation.

APPENDIX TABLE VII.8

OVERALL COLLEGE ATTENDANCE RATES[1], BY PROJECT TYPE

(standard deviations and sample sizes provided)

Type of Project	Overall College Attendance Rate		
	Mean	Std. Dev.	Sample N
Rural	80.9 %	2.3	62
Urban	88.9	1.2	117
Based at four-year host institutions	87.2	1.1	126
Based at two-year host institutions	81.8	3.6	53
Small (no more than 60 students)	85.6	0.9	39
Medium (61-99 students)	85.4	1.8	92
Large (over 100 students)	88.6	0.9	48
Young (2 to 5 years old)	79.5	4.8	33
Middle-aged (6 to 20 years old)	90.7	1.2	61
Mature (over 20 years old)	85.1	1.4	84
Math/science focus	88.6	1.9	59
Foundational focus	85.3	1.3	54
Structured focus	85.6	1.2	29
Unstructured focus	83.5	2.0	29
No work experience	84.0	1.8	88
Part-year work experience	87.8	1.0	57
Year-round work experience	90.9	0.6	27
Resid. nonbridge summer program	85.7	1.2	150
No res. nonbridge summer program	89.7	2.3	28
0-2 student performance emphases	86.2	1.6	34
3-4 student performance emphases	82.7	2.1	66
5-6 student performance emphases	88.4	2.1	72
All projects	**86.2**	**0.9**	**179**

[1] The overall college attendance rate is the average share of an Upward Bound project's graduates that attends a two- or four-year college following graduation.

APPENDIX TABLE VII.9

ATTENDANCE RATES AT THE HOST INSTITUTION[1], BY PROJECT TYPE

(standard deviations and sample sizes provided)

Type of Project	Attendance Rate at the Host Institution		
	Mean	Std. Dev.	Sample N
Rural	43.2 %	2.8	62
Urban	32.3	3.0	114
Based at four-year host institutions	35.8	2.7	125
Based at two-year host institutions	37.3	2.1	51
Small (no more than 60 students)	36.7	1.9	39
Medium (61-99 students)	38.3	3.2	89
Large (over 100 students)	29.9	1.9	48
Young (2 to 5 years old)	46.8	2.7	32
Middle-aged (6 to 20 years old)	34.7	5.0	59
Mature (over 20 years old)	34.5	3.1	84
Math/science focus	33.2	4.1	58
Foundational focus	41.7	4.5	52
Structured focus	35.4	2.3	29
Unstructured focus	35.1	3.7	29
No work experience	37.1	3.8	87
Part-year work experience	38.8	3.2	56
Year-round work experience	27.3	2.9	27
Resid. nonbridge summer program	35.5	2.3	149
No res. nonbridge summer program	40.3	1.5	26
0-2 student performance emphases	38.1	2.7	34
3-4 student performance emphases	36.4	2.0	66
5-6 student performance emphases	36.3	3.0	69
All projects	**36.1**	**1.9**	**176**

[1] Attendance at the host institution is the average percentage of an Upward Bound project's graduates that attends the host institution following graduation.

APPENDIX TABLE VII.10

NUMBER OF PERFORMANCE EMPHASES[1], BY PROJECT TYPE

(including additional projects in sample)

Type of Project	Average Number of Emphases
Rural, domestic	4.1
Urban, domestic	4.1
Overseas	5.1
Based at four-year postsecondary host institutions	4.3
Based at two-year postsecondary host institutions	3.7
Based at non-postsecondary host institution	4.0
Small (no more than 60 students)	4.0
Medium (61-99 students)	4.1
Large (over 100 students)	4.3
Young (2 to 5 years old)	4.2
Middle-aged (6 to 20 years old)	4.2
Mature (over 20 years old)	4.0
Math/science focus	4.5
Foundational focus	3.9
Structured focus	3.7
Unstructured focus	3.9
No work experience	4.0
Part-year work experience	4.1
Year-round work experience	4.5
Residential nonbridge summer program	4.2
No residential nonbridge summer program	3.9
All projects	**4.1**
Number of observations	**217**

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[1] The number of performance emphases is the number of factors considered "very important" for students' continuation in the Upward Bound program (minimum = 0, maximum = 6).

APPENDIX TABLE VII.11

AVERAGE DROPOUT RATES[1] FROM UPWARD BOUND PROGRAMS, BY PROJECT TYPE

(including additional projects in sample)

Type of Project	Average Dropout Rate
Rural, domestic	18 %
Urban, domestic	20
Overseas	18
Based at four-year postsecondary host institutions	19
Based at two-year postsecondary host institutions	20
Based at non-postsecondary host institution	17
Small(no more than 60 students)	21
Medium(61-99 students)	18
Large (over 100 students)	21
Young (2 to 5 years old)	17
Middle-aged (6 to 20 years old)	19
Mature (over 20 years old)	20
Math/science focus	23
Foundational focus	17
Structured focus	21
Unstructured focus	15
No work experience	18
Part-year work experience	24
Year-round work experience	15
Residential non bridge summer program	20
Residential nonbridge summer program	18
0-2 student performance emphases	18
3-4 student performance emphases	19
5-6 student performance emphases	20
All	**19**
Number of observations	**170**

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[1] The dropout rate equals the percentage of students from the 1991-92 program that neither graduated from high school nor returned to Upward Bound by the fall of 1992.

APPENDIX TABLE VII.12

COLLEGE ATTENDANCE RATES[1], BY PROJECT TYPE
(including additional projects in sample)

Type of Project	Average College Attendance Rate		
	Overall	Two-Year	Four-Year
Rural, domestic	81 %	23 %	58 %
Urban, domestic	89	19	70
Overseas	92	20	72
Four-year postsecondary host	87	14	73
Two-year postsecondary host	83	44	39
Non-postsecondary host institution	89	23	65
Small (no more than 60 students)	86	29	57
Medium (61-99 students)	86	19	66
Large (over 100 students)	89	14	75
Young (2 to 5 years old)	81	31	49
Middle-aged (6 to 20 years old)	91	23	67
Mature (over 20 years old)	85	15	70
Math/science focus	88	17	71
Foundational focus	86	21	65
Structured focus	84	25	61
Unstructured focus	86	22	62
No work experience	84	23	61
Part-year work experience	88	16	71
Year-round work experience	91	21	70
Resid. nonbridge summer program	86	19	67
No res. nonbridge summer program	89	27	62
0-2 student performance emphases	86	28	58
3-4 student performance emphases	84	19	65.
5-6 student performance emphases	88	18	70
All projects	**86**	**20**	**66**
Number of observations	**213**	**213**	**213**

[1] The college attendance rate is the average share of an Upward Bound project's graduates that attends a two- or four-year college following graduation.

APPENDIX TABLE VII.13

ATTENDANCE AT HOST INSTITUTION[1], BY PROJECT TYPE

(including additional projects in sample)

Type of Project	Percentage of Graduates Attending Host Institution (approximate)
Rural, domestic	42
Urban, domestic	31
Overseas	41
Based at four-year postsecondary host institutions	36
Based at two-year postsecondary host institutions	37
Based at non-postsecondary host institution	0
Small (no more than 60 students)	36
Medium (61-99 students)	36
Large (over 100 students)	30
Young (2 to 5 years old)	43
Middle-aged (6 to 20 years old)	33
Mature (over 20 years old)	34
Math/science focus	32
Foundational focus	41
Structured focus	32
Unstructured focus	34
No work experience	36
Part-year work experience	36
Year-round work experience	28
Residential nonbridge summer program	34
No residential nonbridge summer program	37
0-2 student performance emphases	34
3-4 student performance emphases	35
5-6 student performance emphases	36
All projects	**35**
Number of observations	**213**

[1] Attendance at host institution is the percentage of an Upward Bound project's graduates that attends the host institution following graduation

APPENDIX TABLE VII.14

Regression Analyses of Upward Bound Dropout Rates

Independent (RHS) Variables	All Regular Upward Bound Grantees			Grantees in the Impact Study (RHS variables added)			Grantees in the Impact Study (no additional RHS variables)			All Upward Bound Grantees in the Grantee Survey		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	24.79	7.84	3.16	-106.49	37.00	-2.88	56.59	17.24	3.28	22.34	6.71	3.33
Share L.I.F.G. Unclear	-3.84	10.60	-0.36	0.00	0.00	---	0.00	0.00	---	1.36	9.90	0.14
Share First Generation	-0.10	4.80	-0.02	23.93	6.21	3.85	18.07	8.08	2.24	-2.25	3.83	-0.59
Share Low Income & F.G.	-31.75	8.22	-3.86	-88.25	17.07	-5.17	-82.98	17.82	-4.66	-22.24	7.02	-3.17
3-4 Performance Emphases	4.56	2.75	1.66	3.13	3.14	1.00	-8.04	4.11	-1.96	4.28	2.38	1.80
5-6 Performance Emphases	-3.56	2.52	-1.41	13.33	3.35	3.98	5.71	2.89	1.98	-3.86	2.36	-1.64
Perform. Emphases Unclear	-4.54	4.97	-0.91	0.00	0.00	---	0.00	0.00	---	-4.78	4.54	-1.05
Discipline Affects Eligibility	-1.36	1.81	-0.75	1.67	2.89	0.58	2.00	3.18	0.63	-2.40	1.65	-1.45
Regular Staff per Student	30.75	36.57	0.84	-110.17	49.57	-2.22	-54.57	58.16	-0.94	13.56	29.62	0.46
Mentors,Tutors per Student	9.58	30.05	0.32	77.45	52.57	1.47	195.74	42.13	4.65	-5.76	27.06	-0.21
Interaction w. Target Sch.	-0.92	0.64	-1.44	2.16	0.97	2.21	0.34	1.12	0.30	-1.20	0.63	-1.92
Interaction w. Parents	1.72	1.15	1.50	2.09	1.67	1.25	2.59	1.80	1.44	2.07	1.09	1.89
Math-Science Focus	9.15	3.06	2.99	9.09	4.49	2.02	4.82	4.72	1.02	7.86	2.97	2.64
Foundational Focus	5.82	3.12	1.87	7.52	3.76	2.00	15.90	4.81	3.31	5.96	3.04	1.96
Structured Focus	4.49	3.10	1.45	13.44	5.56	2.42	6.83	4.90	1.39	6.30	2.79	2.26
Program Focus Unclear	0.91	6.75	0.13	-17.39	7.06	-2.46	-15.45	8.55	-1.81	-0.69	5.83	-0.12
Part-Year Work Program	8.69	2.42	3.60	1.30	3.45	0.38	-5.76	3.58	-1.61	6.83	2.21	3.09
Year-Round Work Program	-0.68	3.02	-0.23	-11.53	3.46	-3.33	-8.85	4.01	-2.21	-1.37	2.79	-0.49
Work Programs Unclear	10.03	3.08	3.26	0.00	0.00	---	0.00	0.00	---	8.67	2.32	3.74
Urban Setting	4.90	2.17	2.26	-7.61	3.34	-2.28	-2.21	3.31	-0.67	4.89	1.96	2.50
2-Year Host Institution	8.48	2.67	3.17	3.61	5.03	0.72	21.17	6.16	3.44	6.84	2.20	3.11
60 or Fewer Students	1.51	2.42	0.62	1.08	5.26	0.21	-5.64	4.29	-1.32	1.93	2.12	0.91
100 or More Students	0.39	2.81	0.14	-0.85	3.53	-0.24	10.24	3.95	2.59	-0.04	2.70	-0.02
Mixed Ethnicity Project	-6.67	3.95	-1.69	2.94	5.10	0.58	-9.18	6.59	-1.39	-6.48	3.94	-1.64
>= 25 % Asian students	10.03	4.22	2.38	23.20	4.23	5.48	20.47	4.00	5.12	7.69	3.86	1.99
>= 50 % Native American	2.84	4.78	0.59	-3.40	6.44	-0.53	2.78	6.51	0.43	8.60	4.24	2.03
>= 50 % Latino students	4.54	3.39	1.34	38.39	5.66	6.78	17.05	3.53	4.83	2.11	3.11	0.68
>= 50 % White students	11.66	2.96	3.94	14.09	4.58	3.07	9.32	4.46	2.09	10.63	2.58	4.12
Project Age Unclear	0.00	0.00	---	0.00	0.00	---	0.00	0.00	---	0.00	0.00	---
Project 2-5 Years Old	-6.69	2.94	-2.28	-4.87	4.62	-1.05	-9.41	5.61	-1.68	-5.08	2.57	-1.98
Project 6-20 Years Old	-4.74	2.66	-1.78	-9.58	3.62	-2.65	-10.11	4.25	-2.38	-3.08	2.46	-1.25
No Residential Program	-2.43	3.59	-0.68	-14.52	3.11	-4.68	-22.57	5.18	-4.36	-3.81	2.85	-1.34
Residential Prog. Unclear	-25.90	6.57	-3.94	0.00	0.00	---	0.00	0.00	---	-21.78	5.84	-3.73
TS 2-Year College Rate	---	---	---	-0.61	0.19	-3.21	---	---	---	---	---	---
TS 4-Year College Rate	---	---	---	-0.95	0.20	-4.68	---	---	---	---	---	---
Optimistic Participants	---	---	---	12.57	2.45	5.13	---	---	---	---	---	---
Employed Participants	---	---	---	-0.20	0.08	-2.57	---	---	---	---	---	---
Undisciplined Participants	---	---	---	2.76	2.11	1.31	---	---	---	---	---	---
Strict Target Schools	---	---	---	-21.90	6.00	-3.65	---	---	---	---	---	---
Nonacademic Host	---	---	---	---	---	---	---	---	---	-4.68	2.42	-1.94
Overseas Setting	---	---	---	---	---	---	---	---	---	6.87	4.04	1.70
Number of observations		137			55			55			169	
Multiple R-Square		0.2766			0.6811			0.5251			0.2189	
Wald F-stat. (overall model)		20.96			89.05			26.81			43.73	
Wald F-stat. (intercept only)		8.38			54.48			11.14			8.89	

Notes: Only the first two columns of results are referred to in the text

For large samples, t-statistics greater than 1.96 and F-statistics greater than 3.84 indicate significance at the .05 level

APPENDIX TABLE VII.15

Regression Analyses of Two-Year College Attendance Rates

Independent (RHS) Variables	All Regular Upward Bound Grantees b	se(b)	t-stat	Grantees in the Impact Study (RHS variables added) b	se(b)	t-stat	Grantees in the Impact Study (no additional RHS variables) b	se(b)	t-stat	All Upward Bound Grantees in the Grantee Survey b	se(b)	t-stat
Intercept	8.11	6.83	1.19	17.34	27.67	0.63	34.15	11.16	3.06	8.28	6.09	1.36
Share L.I.F.G. Unclear	-2.86	7.29	-0.39	0.00	0.00	---	0.00	0.00	---	6.13	6.28	0.98
Share First Generation	-0.32	3.43	-0.09	-3.87	4.83	-0.80	-2.11	5.13	-0.41	1.07	3.03	0.35
Share Low Income & F.G.	2.88	6.08	0.47	1.72	8.46	0.20	-12.08	9.15	-1.32	-0.06	5.31	-0.01
3-4 Performance Emphases	-3.53	2.22	-1.59	-5.42	2.15	-2.52	-9.45	2.66	-3.55	-2.30	2.08	-1.11
5-6 Performance Emphases	0.59	2.14	0.28	4.58	2.36	1.94	6.67	2.96	2.26	-0.39	2.00	-0.19
Perform. Emphases Unclear	9.14	4.50	2.03	-8.69	6.57	-1.32	-8.36	4.72	-1.77	10.64	4.53	2.35
Discipline Affects Eligibility	2.27	1.73	1.32	7.59	2.72	2.79	8.33	2.94	2.83	1.72	1.62	1.06
Regular Staff per Student	-68.21	26.03	-2.62	-113.96	51.93	-2.19	-192.51	48.24	-3.99	-62.02	22.37	-2.77
Mentors,Tutors per Student	-2.64	19.42	-0.14	-22.83	40.59	-0.56	-2.17	48.54	-0.04	4.96	18.04	0.27
Interaction w. Target Sch.	0.01	0.59	0.02	-2.14	0.83	-2.58	-1.61	0.86	-1.88	-0.03	0.55	-0.06
Interaction w. Parents	1.62	0.73	2.20	-2.09	1.09	-1.92	-0.92	1.31	-0.70	1.09	0.69	1.59
Math-Science Focus	-2.78	3.41	-0.81	-4.27	3.07	-1.39	-1.08	3.15	-0.34	-3.17	3.27	-0.97
Foundational Focus	-0.82	3.51	-0.23	-12.74	2.48	-5.13	-8.51	3.61	-2.36	-0.53	3.32	-0.16
Structured Focus	0.04	3.37	0.01	-0.85	3.55	-0.24	-1.08	3.43	-0.31	1.51	3.19	0.47
Program Focus Unclear	-2.56	5.62	-0.46	-5.15	6.98	-0.74	-3.87	4.61	-0.84	-4.20	5.25	-0.80
Part-Year Work Program	-3.44	1.98	-1.74	4.34	2.28	1.91	2.41	2.89	0.84	-3.91	1.83	-2.13
Year-Round Work Program	-4.44	2.18	-2.04	4.61	2.32	1.99	2.93	2.77	1.06	-2.30	2.13	-1.08
Work Programs Unclear	-15.79	4.45	-3.55	20.67	11.60	1.78	36.56	10.31	3.55	-14.62	3.71	-3.94
Urban Setting	5.93	2.21	2.69	3.04	2.60	1.17	3.26	3.12	1.05	5.89	2.18	2.70
2-Year Host Institution	29.13	2.56	11.36	36.86	3.74	9.85	42.24	4.06	10.39	29.04	2.44	11.93
60 or Fewer Students	4.49	2.87	1.56	8.03	2.73	2.95	10.88	3.80	2.86	2.71	2.53	1.07
100 or More Students	-2.32	1.78	-1.30	-8.09	2.19	-3.70	-6.86	2.32	-2.96	-0.75	1.71	-0.44
Mixed Ethnicity Project	14.09	2.92	4.82	10.97	3.03	3.62	13.89	5.43	2.56	13.65	3.01	4.54
>= 25 % Asian students	1.69	3.69	0.46	-1.67	3.69	-0.45	10.25	3.71	2.77	4.09	3.44	1.19
>= 50 % Native American	21.68	4.25	5.11	28.65	5.05	5.67	32.60	4.86	6.71	21.93	3.41	6.44
>= 50 % Latino students	8.97	2.92	3.08	10.24	4.01	2.55	16.35	3.57	4.58	8.47	2.48	3.42
>= 50 % White students	11.97	2.78	4.30	2.03	3.03	0.67	1.44	4.30	0.33	12.91	2.76	4.68
Project Age Unclear	-3.36	5.44	-0.62	0.00	0.00	---	0.00	0.00	---	0.64	4.98	0.13
Project 2-5 Years Old	-1.07	2.93	-0.36	-17.05	3.49	-4.89	-16.38	3.93	-4.17	-1.62	2.62	-0.62
Project 6-20 Years Old	1.15	1.88	0.61	-0.79	2.53	-0.31	-1.34	2.63	-0.51	2.11	1.89	1.12
No Residential Program	-5.31	2.42	-2.19	-2.79	3.19	-0.87	-4.97	3.82	-1.30	-2.86	2.20	-1.30
Residential Prog. Unclear	43.22	6.37	6.78	0.00	0.00	---	0.00	0.00	---	40.68	5.78	7.04
TS 2-Year College Rate	---	---	---	0.49	0.13	3.89	---	---	---	---	---	---
TS 4-Year College Rate	---	---	---	0.15	0.14	1.11	---	---	---	---	---	---
Optimistic Participants	---	---	---	0.24	1.74	0.14	---	---	---	---	---	---
Employed Participants	---	---	---	0.05	0.09	0.52	---	---	---	---	---	---
Undisciplined Participants	---	---	---	-5.55	1.84	-3.01	---	---	---	---	---	---
Strict Target Schools	---	---	---	-32.21	7.43	-4.34	---	---	---	---	---	---
Nonacademic Host	---	---	---	---	---	---	---	---	---	7.65	2.19	3.50
Overseas Setting	---	---	---	---	---	---	---	---	---	1.55	3.75	0.41
Number of observations		179			66			66			213	
Multiple R-Square		0.5078			0.7901			0.7207			0.4789	
Wald F-stat. (overall model)		43.48			679.12			100.53			57.98	
Wald F-stat. (intercept only)		26.27			1673.85			59.49			32.15	

Notes: Only the first two columns of results are referred to in the text

For large samples, t-statistics greater than 1.96 and F-statistics greater than 3.84 indicate significance at the .05 level

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APPENDIX TABLE VII.16

Regression Analyses of Four-Year College Attendance Rates

Independent (RHS) Variables	All Regular Upward Bound Grantees			Grantees in the Impact Study (RHS variables added)			Grantees in the Impact Study (no additional RHS variables)			All Upward Bound Grantees in the Grantee Survey		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	63.30	10.61	5.97	51.79	38.76	1.34	56.79	11.11	5.11	63.87	9.14	6.99
Share L.I.F.G. Unclear	5.24	10.06	0.52	0.00	0.00	---	0.00	0.00	---	-3.86	8.02	-0.48
Share First Generation	11.82	4.51	2.62	12.41	6.60	1.88	17.29	6.68	2.59	9.43	3.80	2.48
Share Low Income & F.G.	-6.42	8.32	-0.77	-21.45	8.77	-2.45	-14.97	7.43	-2.02	-1.59	7.11	-0.22
3-4 Performance Emphases	-1.62	2.63	-0.62	-2.16	3.44	-0.63	3.71	3.21	1.16	-2.12	2.43	-0.87
5-6 Performance Emphases	5.63	3.18	1.77	4.25	2.86	1.49	4.24	3.07	1.38	5.51	2.97	1.86
Perform. Emphases Unclear	-0.56	3.30	-0.17	-26.48	9.03	-2.93	-12.58	4.59	-2.74	-2.46	3.16	-0.78
Discipline Affects Eligibility	-1.42	2.42	-0.58	-9.09	3.77	-2.41	-6.95	3.30	-2.10	-1.48	2.38	-0.62
Regular Staff per Student	141.70	32.21	4.40	283.64	57.88	4.90	317.89	55.38	5.74	137.38	28.00	4.91
Mentors,Tutors per Student	36.14	27.43	1.32	92.36	51.26	1.80	55.92	51.32	1.09	27.41	24.25	1.13
Interaction w. Target Sch.	0.74	0.88	0.83	-0.70	1.27	-0.55	-0.21	1.27	-0.17	0.69	0.81	0.85
Interaction w. Parents	-2.06	1.18	-1.74	-1.62	1.85	-0.88	-2.53	1.61	-1.58	-1.47	1.09	-1.34
Math-Science Focus	3.89	5.18	0.75	5.25	4.47	1.18	1.72	3.89	0.44	4.46	4.95	0.90
Foundational Focus	1.61	4.91	0.33	5.25	4.42	1.19	2.32	4.39	0.53	1.62	4.53	0.36
Structured Focus	0.27	4.67	0.06	8.69	5.04	1.72	4.77	4.09	1.17	-0.86	4.38	-0.20
Program Focus Unclear	-5.90	6.36	-0.93	31.25	8.84	3.54	18.93	5.46	3.47	-1.95	6.15	-0.32
Part-Year Work Program	3.62	2.80	1.29	-6.23	3.75	-1.66	-5.33	3.03	-1.76	3.09	2.59	1.19
Year-Round Work Program	8.36	3.45	2.42	-7.74	3.82	-2.03	-5.04	4.01	-1.26	5.76	3.25	1.77
Work Programs Unclear	17.48	5.89	2.97	-73.06	11.75	-6.22	-78.58	10.39	-7.56	14.24	5.31	2.68
Urban Setting	-3.71	3.42	-1.08	-8.96	3.21	-2.79	-5.96	3.24	-1.84	-4.18	3.32	-1.26
2-Year Host Institution	-34.78	3.56	-9.77	-46.08	4.49	-10.27	-46.18	4.19	-11.01	-34.97	3.29	-10.64
60 or Fewer Students	-4.25	3.89	-1.09	0.13	4.87	0.03	-1.37	4.47	-0.31	-2.27	3.43	-0.66
100 or More Students	6.92	3.32	2.08	16.56	2.93	5.65	17.81	2.50	7.13	4.72	3.17	1.49
Mixed Ethnicity Project	-20.68	4.88	-4.23	-15.26	5.20	-2.93	-17.27	5.54	-3.12	-19.92	5.04	-3.96
>= 25 % Asian students	1.86	4.16	0.45	1.38	4.83	0.29	-0.68	4.17	-0.16	-2.27	3.80	-0.60
>= 50 % Native American	-40.84	4.43	-9.21	-23.46	7.51	-3.12	-38.07	6.54	-5.82	-45.52	3.79	-12.02
>= 50 % Latino students	-11.09	3.83	-2.90	-8.91	4.71	-1.89	-7.32	4.43	-1.65	-11.26	3.20	-3.52
>= 50 % White students	-16.91	4.13	-4.09	-4.94	3.90	-1.27	-3.30	4.13	-0.80	-18.70	4.01	-4.67
Project Age Unclear	14.56	5.62	2.59	0.00	0.00	---	0.00	0.00	---	10.00	5.19	1.93
Project 2-5 Years Old	-1.94	4.34	-0.45	-0.08	4.84	-0.02	-2.48	4.51	-0.55	-0.02	3.92	-0.00
Project 6-20 Years Old	5.34	2.90	1.84	12.76	4.26	3.00	11.04	2.86	3.86	4.05	2.83	1.43
No Residential Program	9.93	3.57	2.78	19.25	4.46	4.31	18.03	4.42	4.08	6.16	3.25	1.89
Residential Prog. Unclear	-49.24	7.60	-6.48	0.00	0.00	---	0.00	0.00	---	-47.40	7.13	-6.65
TS 2-Year College Rate	---	---	---	0.06	0.19	0.31	---	---	---	---	---	---
TS 4-Year College Rate	---	---	---	0.48	0.20	2.41	---	---	---	---	---	---
Optimistic Participants	---	---	---	-0.25	2.07	-0.12	---	---	---	---	---	---
Employed Participants	---	---	---	-0.05	0.11	-0.40	---	---	---	---	---	---
Undisciplined Participants	---	---	---	5.23	2.50	2.10	---	---	---	---	---	---
Strict Target Schools	---	---	---	5.11	9.95	0.51	---	---	---	---	---	---
Nonacademic Host	---	---	---	---	---	---	---	---	---	-9.62	3.13	-3.07
Overseas Setting	---	---	---	---	---	---	---	---	---	1.37	5.51	0.25
Number of observations		179			66			66			213	
Multiple R-Square		0.5569			0.7676			0.7385			0.5208	
Wald F-stat. (overall model)		262.19			296.10			12937.88			357.16	
Wald F-stat. (intercept only)		53.45			1629.78			1006.05			64.12	

Notes: Only the first two columns of results are referred to in the text

For large samples, t-statistics greater than 1.96 and F-statistics greater than 3.84 indicate significance at the .05 level

APPENDIX TABLE VII.17

Regression Analyses of Overall College Attendance Rates

Independent (RHS) Variables	All Regular Upward Bound Grantees			Grantees in the Impact Study (RHS variables added)			Grantees in the Impact Study (no additional RHS variables)			All Upward Bound Grantees in the Grantee Survey		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	71.41	5.85	12.21	69.13	26.92	2.57	90.94	10.91	8.34	72.14	4.81	15.00
Share L.I.F.G. Unclear	2.38	5.85	0.41	0.00	0.00	—	0.00	0.00	—	2.27	4.90	0.46
Share First Generation	11.50	3.72	3.09	8.54	7.40	1.15	15.17	7.39	2.05	10.50	3.20	3.28
Share Low Income & F.G.	-3.55	4.36	-0.81	-19.73	7.97	-2.47	-27.05	8.28	-3.27	-1.65	3.62	-0.45
3-4 Performance Emphases	-5.15	2.16	-2.38	-7.58	3.00	-2.52	-5.74	3.09	-1.86	-4.42	2.00	-2.21
5-6 Performance Emphases	6.22	2.23	2.79	8.83	2.37	3.72	10.91	3.39	3.22	5.12	2.00	2.56
Perform. Emphases Unclear	8.59	3.61	2.38	-35.17	7.12	-4.94	-20.95	5.44	-3.85	8.17	3.48	2.35
Discipline Affects Eligibility	0.86	2.24	0.38	-1.51	3.18	-0.47	1.38	4.18	0.33	0.24	2.11	0.11
Regular Staff per Student	73.49	23.32	3.15	169.68	47.14	3.60	125.38	50.63	2.48	75.36	19.91	3.78
Mentors,Tutors per Student	33.49	23.96	1.40	69.53	48.68	1.43	53.75	52.24	1.03	32.37	22.33	1.45
Interaction w. Target Sch.	0.75	0.62	1.20	-2.84	1.18	-2.40	-1.82	1.18	-1.54	0.66	0.59	1.12
Interaction w. Parents	-0.44	0.72	-0.61	-3.71	1.92	-1.94	-3.46	1.99	-1.74	-0.37	0.65	-0.57
Math-Science Focus	1.11	2.69	0.41	0.98	3.32	0.30	0.64	3.47	0.18	1.29	2.49	0.52
Foundational Focus	0.79	2.81	0.28	-7.49	3.56	-2.11	-6.19	3.47	-1.78	1.09	2.54	0.43
Structured Focus	0.31	2.57	0.12	7.84	3.51	2.23	3.69	3.68	1.00	0.65	2.32	0.28
Program Focus Unclear	-8.46	5.06	-1.67	26.10	6.79	3.84	15.06	6.13	2.46	-6.15	4.66	-1.32
Part-Year Work Program	0.18	1.80	0.10	-1.89	3.68	-0.51	-2.92	3.32	-0.88	-0.82	1.64	-0.50
Year-Round Work Program	3.92	2.11	1.86	-3.13	3.12	-1.00	-2.11	3.51	-0.60	3.46	2.01	1.72
Work Programs Unclear	1.69	3.97	0.43	-52.38	9.24	-5.67	-42.02	10.33	-4.07	-0.38	3.40	-0.11
Urban Setting	2.22	2.35	0.95	-5.92	3.25	-1.82	-2.70	3.80	-0.71	1.70	2.23	0.76
2-Year Host Institution	-5.66	3.26	-1.74	-9.22	4.12	-2.24	-3.94	4.46	-0.88	-5.92	3.08	-1.92
60 or Fewer Students	0.23	2.43	0.10	8.17	4.66	1.75	9.51	4.85	1.96	0.45	2.20	0.20
100 or More Students	4.60	2.06	2.23	8.46	2.78	3.05	10.94	2.95	3.71	3.97	1.99	2.00
Mixed Ethnicity Project	-6.60	3.03	-2.17	-4.29	5.03	-0.85	-3.38	5.60	-0.60	-6.27	2.95	-2.13
>= 25 % Asian students	3.55	2.50	1.42	-0.28	3.49	-0.08	9.58	3.87	2.47	1.83	2.20	0.83
>= 50 % Native American	-19.17	4.40	-4.35	5.19	5.93	0.87	-5.47	5.31	-1.03	-23.59	3.67	-6.42
>= 50 % Latino students	-2.12	2.61	-0.81	1.33	2.69	0.49	9.03	4.24	2.13	-2.78	2.27	-1.23
>= 50 % White students	-4.93	2.32	-2.13	-2.91	3.56	-0.82	-1.87	4.27	-0.44	-5.79	2.16	-2.69
Project Age Unclear	11.20	4.57	2.45	0.00	0.00	—	0.00	0.00	—	10.64	4.12	2.59
Project 2-5 Years Old	-3.00	4.01	-0.75	-17.13	4.75	-3.61	-18.86	5.28	-3.57	-1.63	3.60	-0.45
Project 6-20 Years Old	6.48	1.78	3.64	11.98	2.91	4.11	9.70	2.44	3.97	6.16	1.66	3.71
No Residential Program	4.62	3.27	1.41	16.46	4.01	4.11	13.06	4.96	2.64	3.30	2.90	1.14
Residential Prog. Unclear	-6.02	7.37	-0.82	0.00	0.00	—	0.00	0.00	—	-6.72	7.11	-0.95
TS 2-Year College Rate	—	—	—	0.55	0.17	3.31	—	—	—	—	—	—
TS 4-Year College Rate	—	—	—	0.63	0.14	4.47	—	—	—	—	—	—
Optimistic Participants	—	—	—	-0.00	1.40	-0.00	—	—	—	—	—	—
Employed Participants	—	—	—	0.00	0.07	0.00	—	—	—	—	—	—
Undisciplined Participants	—	—	—	-0.32	1.79	-0.18	—	—	—	—	—	—
Strict Target Schools	—	—	—	-27.09	8.02	-3.38	—	—	—	—	—	—
Nonacademic Host	—	—	—	—	—	—	—	—	—	-1.97	2.22	-0.89
Overseas Setting	—	—	—	—	—	—	—	—	—	2.92	3.56	0.82
Number of observations		179			66			66			213	
Multiple R-Square		0.2996			0.5984			0.5010			0.2962	
Wald F-stat. (overall model)		1610.06			782.67			1735.71			2599.49	
Wald F-stat. (intercept only)		10.40			1040.71			10.33			12.21	

Notes: Only the first two columns of results are referred to in the text

For large samples, t-statistics greater than 1.96 and F-statistics greater than 3.84 indicate significance at the .05 level

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APPENDIX TABLE VII.18

Regression Analyses of Attendance Rates at the Host Institution

Independent (RHS) Variables	All Regular Upward Bound Grantees			Grantees in the Impact Study (RHS variables added)			Grantees in the Impact Study (no additional RHS variables)			All Upward Bound Grantees in the Grantee Survey		
	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat	b	se(b)	t-stat
Intercept	27.72	9.36	2.96	188.51	46.08	4.09	53.31	12.42	4.29	28.97	8.53	3.40
Share L.I.F.G. Unclear	18.41	7.98	2.31	0.00	0.00	—	0.00	0.00	—	14.52	7.65	1.90
Share First Generation	6.43	6.49	0.99	-17.01	7.07	-2.41	-13.77	6.45	-2.14	7.29	5.75	1.27
Share Low Income & F.G.	19.79	7.24	2.73	20.33	9.60	2.12	17.92	11.77	1.52	13.56	6.82	1.99
3-4 Performance Emphases	-4.62	3.27	-1.41	2.92	3.84	0.76	4.37	4.09	1.07	-1.91	3.12	-0.61
5-6 Performance Emphases	4.25	3.07	1.38	-2.48	3.74	-0.66	0.72	3.39	0.21	3.33	3.02	1.10
Perform. Emphases Unclear	-19.52	4.83	-4.04	44.53	9.95	4.48	42.92	5.76	7.46	-15.83	4.56	-3.47
Discipline Affects Eligibility	5.85	2.79	2.10	19.95	2.93	6.80	18.83	2.81	6.70	3.84	2.74	1.40
Regular Staff per Student	-12.19	35.49	-0.34	12.68	83.48	0.15	-43.70	71.74	-0.61	-6.76	34.25	-0.20
Mentors,Tutors per Student	-36.38	44.77	-0.81	-163.51	57.56	-2.84	-121.42	56.16	-2.16	-25.83	41.27	-0.63
Interaction w. Target Sch.	2.51	1.08	2.33	0.90	0.90	1.00	1.20	1.06	1.13	2.25	1.04	2.15
Interaction w. Parents	-2.09	1.28	-1.64	0.45	1.63	0.27	-1.03	1.59	-0.65	-2.09	1.22	-1.71
Math-Science Focus	1.01	4.13	0.24	-11.09	6.10	-1.82	-9.73	4.50	-2.16	0.19	3.99	0.05
Foundational Focus	4.63	5.00	0.93	-9.14	4.73	-1.93	-11.00	4.87	-2.26	6.03	4.76	1.27
Structured Focus	-0.27	3.84	-0.07	-16.13	5.27	-3.06	-13.94	4.74	-2.94	-0.23	3.70	-0.06
Program Focus Unclear	2.18	7.17	0.30	-59.28	9.10	-6.51	-63.57	5.38	-11.82	-1.00	7.00	-0.14
Part-Year Work Program	8.77	2.93	3.00	12.42	4.97	2.50	18.72	4.07	4.60	6.75	2.94	2.30
Year-Round Work Program	-10.88	3.78	-2.88	-16.41	4.53	-3.62	-16.31	4.38	-3.72	-8.62	3.74	-2.31
Work Programs Unclear	-16.36	6.99	-2.34	60.57	11.05	5.48	64.63	9.42	6.86	-9.82	5.62	-1.75
Urban Setting	-16.83	3.27	-5.14	-15.53	3.91	-3.97	-25.28	3.67	-6.89	-15.85	3.20	-4.96
2-Year Host Institution	-11.09	4.29	-2.58	-21.17	5.26	-4.03	-24.48	4.96	-4.94	-9.82	4.18	-2.35
60 or Fewer Students	2.48	3.95	0.63	1.66	4.32	0.38	2.18	4.29	0.51	0.31	3.60	0.09
100 or More Students	-6.51	3.54	-1.84	-3.26	3.81	-0.85	-5.87	3.45	-1.70	-4.08	3.51	-1.16
Mixed Ethnicity Project	-1.22	5.34	-0.23	15.71	7.05	2.23	20.66	7.35	2.81	-2.03	5.26	-0.39
>= 25 % Asian students	1.83	6.43	0.28	10.75	5.81	1.85	10.66	5.34	2.00	6.29	5.86	1.07
>= 50 % Native American	-15.64	6.34	-2.47	-2.58	8.72	-0.30	8.68	7.21	1.20	-16.21	5.75	-2.82
>= 50 % Latino students	6.55	3.92	1.67	4.90	5.37	0.91	9.62	4.66	2.06	6.51	3.72	1.75
>= 50 % White students	-7.03	4.19	-1.68	-11.53	4.28	-2.70	-8.60	5.03	-1.71	-5.98	3.99	-1.50
Project Age Unclear	-39.37	7.07	-5.57	0.00	0.00	—	0.00	0.00	—	-34.02	6.69	-5.09
Project 2-5 Years Old	9.24	5.15	1.79	15.01	5.56	2.70	13.21	5.62	2.35	9.64	4.72	2.04
Project 6-20 Years Old	-1.52	4.24	-0.36	6.42	4.61	1.39	1.35	4.38	0.31	0.42	4.27	0.10
No Residential Program	11.20	5.95	1.88	19.62	4.62	4.24	22.62	4.27	5.30	6.48	5.75	1.13
Residential Prog. Unclear	10.16	9.47	1.07	0.00	0.00	—	0.00	0.00	—	2.07	9.04	0.23
TS 2-Year College Rate	—	—	—	-0.38	0.21	-1.79	—	—	—	—	—	—
TS 4-Year College Rate	—	—	—	-0.36	0.25	-1.44	—	—	—	—	—	—
Optimistic Participants	—	—	—	-7.54	2.59	-2.91	—	—	—	—	—	—
Employed Participants	—	—	—	0.19	0.10	1.89	—	—	—	—	—	—
Undisciplined Participants	—	—	—	-0.32	3.20	-0.10	—	—	—	—	—	—
Strict Target Schools	—	—	—	-7.91	8.88	-0.89	—	—	—	—	—	—
Nonacademic Host	—	—	—	—	—	—	—	—	—	-5.54	10.36	-0.54
Overseas Setting	—	—	—	—	—	—	—	—	—	-18.25	6.19	-2.95
Number of observations		176			65			65			198	
Multiple R-Square		0.2727			0.5840			0.5373			0.2327	
Wald F-stat. (overall model)		74.04			130.44			131.17			87.69	
Wald F-stat. (intercept only)		74.04			163.19			131.17			87.69	

Notes: Only the first two columns of results are referred to in the text

For large samples, t-statistics greater than 1.96 and F-statistics greater than 3.84 indicate significance at the .05 level

A REPORT ON UPWARD BOUND TARGET SCHOOLS

Zev Waldman
David E. Myers
Jon E. Jacobson
Mary T. Moore

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EXECUTIVE SUMMARY

This report contains findings from the Survey of Upward Bound Target Schools, conducted in 1993-94 by Mathematica Policy Research, Inc. (MPR) under contract to the U.S. Department of Education (ED) Planning and Evaluation Service. Target schools are the secondary schools--typically junior high, middle, or high schools--from which Upward Bound projects recruit and select students. Upward Bound, which was initiated in 1965 as part of the War on Poverty, is a federal program which seeks to help economically disadvantaged students complete high school and to improve their rates of enrollment and retention in postsecondary education. Because target schools are likely to be a key influence on the educational, personal, and psychosocial development of Upward Bound participants, an understanding of the in-school environment is critical to a full understanding of the Upward Bound program. In addition, Upward Bound's success may rest on the extent to which it successfully complements and augments the in-school experiences of its participants.

Based on data collected from more than 700 Upward Bound target schools and other sources, this report provides a comprehensive picture of the target schools. It examines the kinds of schools that Upward Bound participants attend, the environment in which these students receive their academic preparation, and the role that target schools play in the Upward Bound program. The research questions addressed in this report include:

- How do Upward Bound target schools compare with other schools in terms of poverty, racial and ethnic composition, and school climate?
- To what extent are other precollege services available in the target schools served by Upward Bound?
- To what extent do target schools interact with Upward Bound projects and what role do they have with respect to the Upward Bound program?
- From the perspective of the target schools, what are the effects of Upward Bound on students and the schools, and how can the program be improved?

The Role of Target Schools in Upward Bound

In 1993 the federal government contributed $160 million dollars to Upward Bound programs to provide precollege services to economically and educationally disadvantaged secondary school students. These federal funds supported 440 regular Upward Bound projects throughout the United States that served about 36,000 students each year at an average federal cost per participant of about $3,650. The projects were typically hosted by two- or four-year colleges and provided services including instruction in academic subjects (such as math, science, English, and a foreign language);

tutoring and counseling; and cultural activities.[1] Federal requirements permit students to enter Upward Bound as early as the end of eighth grade and to stay in the program through the summer after high school graduation. The target population for Upward Bound includes students who are low income (below 150 percent of the poverty line) or whose parents have not received a baccalaureate degree ("potential first generation college students").

Target schools are important partners to Upward Bound projects in at least two ways. First, Upward Bound staff typically cultivate relationships with staff in middle, junior high, and high schools to obtain new recruits to the program. Often, a point person at the target schools, such as a guidance counselor, helps steer students into the program. Second, target schools are the institutions through which Upward Bound participants receive their core education. Upward Bound projects supplement this core to improve participants' secondary performance and post-secondary educational opportunities. On average, Upward Bound projects draw students from about nine different target schools. The typical target school has about eight participants in Upward Bound and has been an Upward Bound target school for ten years.

About the Target School Survey

The target school survey was conducted as part of a comprehensive five-year study of Upward Bound projects, target schools, and students being conducted by MPR. The study focuses on "regular" Upward Bound projects which means it excludes Upward Bound projects that serve veterans or those that received special grants to emphasize a math-science curriculum. In addition to the target school survey, the national study includes a survey of nearly 250 Upward Bound grantees, detailed case studies of 20 Upward Bound programs that represent the varied populations and communities served by Upward Bound, and a study of program effectiveness. For the effectiveness study, students applying to a representative sample of Upward Bound projects were randomly selected to either participate in the program or become members of a control group. Both groups of students will be surveyed approximately one year and three years after random assignment. Effectiveness will be determined by comparing the two groups on a range of measures including high school performance (e.g., grades, courses taken), college enrollment and persistence, employment outcomes, and attitudes and expectations.

The findings in this report are based on a survey of middle and high schools associated with a nationally representative sample of Upward Bound projects. The term "middle school" as used in the report includes secondary schools without grade 10 or higher. More specifically, 70 projects that were sampled for the effectiveness component of the national Upward Bound evaluation provided lists of schools from which they recruited or selected students between 1990 and 1993. Staff in these schools received a two-part mail questionnaire asking information from both the school principal and the Upward Bound liaison--a school staff member identified by the Upward Bound project as the main contact for the project in each school. The sample included staff in 754 target schools; 96 percent of these schools returned responses.

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[1] For a detailed discussion of Upward Bound program operations, see Fasciano and Jacobson (1995).

Findings

The findings contained in this report are framed by four sets of issues: target school demographics, precollegiate programs in the target schools, the relationship between Upward Bound and its target schools, and target schools' perceptions of Upward Bound's effectiveness.

1. Upward Bound's Reach in the Nation's Schools and Target School Demographics

The fact that Upward Bound is limited to serving students from a select group of secondary schools raises a set of important questions about the program's reach into the nation's schools. These questions include: How many target schools are there? What fraction of the nation's secondary schools are target schools? What fraction of the nation's 8th-12th graders (the Upward Bound target age) attend the target schools? Since only students in the target schools can potentially access Upward Bound, understanding the extent of Upward Bound's reach into the nation's schools is particularly critical. Another set of important questions concerns the academic and social climate in the target schools and the extent to which the target schools differ from schools generally. For instance, what features characterize the schools' students and academic programs? Are certain schools (for example, urban schools or schools with predominantly low income students) particularly likely to be target schools?

Three important findings emerge in response to these questions. First, while Upward Bound serves a relatively small share of schools with Upward Bound aged students (under 10 percent), these schools enroll over one-fifth of the nation's students in grade 8 or above. Second, the Upward Bound target schools are almost exclusively public schools and are primarily high schools. Third, they are more likely than other secondary schools to be located in an urban area, serve predominantly low income students (based on free lunch eligibility), be predominantly nonwhite, and enroll more students. Estimates from the target school survey indicate that:

- Upward Bound draws students from 4,145 schools nationally or about 8 percent of schools nationwide that enroll students in grade 8 or above. Because of their size, the Upward Bound target schools are estimated to enroll about 22 percent of all students in grades 8 to 12.

- Upward Bound target schools are almost exclusively public schools; 4 of 5 are high schools; 60 percent are located in urban areas; nearly 4 in 10 have a free lunch eligibility rate of over 40 percent; about half are predominantly white, and more than one-quarter are predominantly African American; nearly 60 percent have more than 750 students.

- While Upward Bound serves 8 percent of all schools with grade 8 or above, it serves 18 percent of high schools, 17 percent of urban schools, 20 percent of schools where over 40 percent of students qualify for free school lunches, 38 percent of predominantly African American schools and between 16 and 24 percent of other predominantly nonwhite schools, and 23 percent of schools with over 750 students.

- Target school principals are more likely than principals nationally to consider student absenteeism, class cutting, and teen pregnancy a serious problem.

2. Precollege Programs in the Target Schools

A range of precollege programs such as Upward Bound aim to prepare and motivate students for college. This report addresses several questions related to precollege programs (including Upward Bound) in the target schools. These include: How common are various precollege programs in the target schools? How many students in a typical target school participate in Upward Bound? How does this number compare with the extent of student participation in other available precollege programs? One reason these questions are important for Upward Bound is that the presence of readily available alternatives can influence students' decisions to participate in Upward Bound. Further, one might imagine that Upward Bound's "spillover" effects on the school--that is, effects that extend beyond those experienced by participants--may be related to the number of students in Upward Bound and in other programs.

Overall the survey data indicate that Upward Bound serves only a small fraction of eligible students in most target schools. Some of these students are enrolled in other precollege programs. For instance, 70 percent of target schools participate in at least one other precollege program (most frequently the federal Talent Search program). These alternative programs usually enroll more students than Upward Bound. Thus in many schools the availability of an alternative program may partly explain why eligible students do not choose to participate in Upward Bound. Despite the prevalence of other precollege programs, the survey results show that for every student in Upward Bound, there are about 5 students who are eligible but not participating in any precollege program. By far, the most common explanation that target school staff give for the nonparticipation of eligible students in Upward Bound is that they do not seek to apply. A fixed number of Upward Bound openings may contribute to some students' failure to apply as may a lack of either interest or time. Only a third of the schools cited a lack of awareness of the program as a reason for eligible students' failure to participate. Other findings include:

- The median target school has 8 Upward Bound participants, which means that Upward Bound serves just a small fraction of low-income students in most target schools (typically between 2 and 3 percent).

- Talent Search, another federal TRIO program is the most common alternative program and is available in more than half the target schools. Talent Search is a much less intensive program than Upward Bound.

- The median target school reported having between 26 and 50 students who are eligible for Upward Bound but who do not participate in any precollege program--about 5 times the number of Upward Bound participants.

3. Relationship Between Upward Bound and Its Target Schools

Early Upward Bound guidelines encouraged projects to work closely with a few high schools and, when possible, to use target school staff as Upward Bound instructors and counselors (1969-70 Federal Guidelines). The report explores the extent to which these early guidelines correspond to present reality by examining target school integration into the Upward Bound program. This integration can take several forms, including the involvement of target school staff in Upward Bound-related activities, the use of target schools as a site for program services, and the interaction between staff from different target schools. The following questions were examined: In what capacities are target school staff involved in the Upward Bound program? How many schools are used as a site for Upward Bound services, and what kinds of services are provided at the school site? How familiar are target school staff with Upward Bound? What target schools and project characteristics are associated with higher levels of target school integration and familiarity with the program?

Overall, we found target school integration with Upward Bound to occur predominantly with the recruitment and screening of students for the program. Staff in over two-fifths of schools are involved in planning Upward Bound activities, and nearly two-fifths of schools are used as a site for Upward Bound activities. However, few target schools have staff who are involved in a broad range of Upward Bound related activities, including recruiting, collaborative planning, and working as an Upward Bound instructor. Other findings include:

- Nearly all schools reported that their staff help recruit or screen students in some capacity. In almost seven of eight schools, the school counselor is the staff member who has primary responsibility for recruiting and screening activities.

- Over one-half the target school liaisons reported that at least half of the school staff are familiar with Upward Bound. In a substantial minority of schools, however, liaisons indicated that staff are not familiar with Upward Bound.

- Target schools working with more Upward Bound participants tend to be more fully integrated in the program than those with fewer participants. Further, staff in these schools tend to be more familiar with the program.

4. Target School Perceptions of Upward Bound's Effectiveness

While target school liaisons' perceptions of program effectiveness are by nature subjective, examining the patterns in these responses can suggest hypotheses about program effects on students. The following are among the questions the report addresses: What are target schools' overall perceptions of Upward Bound? What are the target schools' perceptions of Upward Bound's effects on participants and on the schools as a whole? What changes would the target schools make to improve the program's effectiveness?

In general, target school liaisons report a favorable impression of Upward Bound. Upward Bound is nearly always seen as having a positive effect on participants, particularly in terms of their academic performance. However, the reported spillover effects of Upward Bound on the operations of the target school are often minor. Upward Bound liaisons are more likely to report effects on the attitudes and actions of parents and teachers than on the actual educational policies adopted by target school administrators. Finally, almost all target school liaisons believe that Upward Bound would be improved by increasing parental involvement in the program and by expanding the program to serve more eligible students. Specific findings include:

- Over four-fifths of target schools report that faculty familiar with Upward Bound have a very or somewhat favorable impression of the program. Schools where more faculty are familiar with the program are also more likely to report that faculty view Upward Bound favorably.

- Target school liaisons' reported effects of Upward Bound on the schools (as opposed to on participants) are higher the more intensive the relationship between Upward Bound and target school staff and the more students Upward Bound serves in the school.

- Target school liaisons' perceptions of Upward Bound's effects on participants is overwhelmingly positive in terms of academic performance, college preparatory course taking, and interaction with staff and peers.

I. UPWARD BOUND TARGET SCHOOLS: INTRODUCTION AND AN OVERVIEW OF TARGET SCHOOLS

A. BACKGROUND

Secondary schools are key institutions for the national Upward Bound program. The mission of the federal Upward Bound program, which was created in 1965 as part of the War on Poverty, is to help disadvantaged students complete high school and improve their rates of enrollment and retention in postsecondary education. Because Upward Bound's precollege services are designed to supplement the regular education that students receive (for example, sessions are scheduled primarily after school and in the summer), project staff inevitably must take into account the educational programs that students' home schools provide and the performance of participating students in their home schools. Furthermore, secondary schools afford Upward Bound projects a convenient means of identifying and recruiting students who are eligible to participate in the program. Almost all Upward Bound projects use target schools as a base for recruiting applicants and all projects report relying on recommendations from school counselors or teachers in their recruitment efforts (Fasciano and Jacobson 1995).

Beyond these connections between secondary schools and Upward Bound projects, relatively little is known about the characteristics of the secondary schools associated with Upward Bound projects and the nature or level of interaction between schools and projects. The information presented in this report begins to fill this void. The report profiles schools that participate as Upward Bound target schools and sheds light on the ways in which target schools and Upward Bound projects collaborate.

Understanding the number and types of schools that serve as target schools is helpful to determining how accessible Upward Bound is to eligible students in the nation and to describing the academic environments to which Upward Bound students are exposed daily. Information about interactions between schools and the projects is particularly important to understanding the extent to which Upward Bound projects influence the schools that participants attend. In recent years debates have sprung up about the relative advantages of placing greater emphasis on school-centered approaches to helping disadvantaged youth pursue college in contrast to emphasizing student-centered strategies (McMullan et al. 1992). Although Upward Bound represents a largely student-centered strategy, in its earliest years federal program leaders expected Upward Bound projects also to influence the target high schools they worked with (Greenleigh Associates 1970). While a few early studies of the program reported negligible impacts from Upward Bound on target schools, with the exception of the present study subsequent program evaluations have given scant attention to this issue or to demographic descriptions of target schools.[1]

1. About the Target School Survey

The findings in this report are based on survey data gathered during 1993 and 1994 from over 700 Upward Bound target schools. We obtained a sample of 754 target schools by asking a nationally representative sample of 70 Upward Bound projects to identify schools from which they recruited or selected students between 1990 and 1993.[2] The sample of target schools emphasizes where students attended school at the time they were recruited or selected by Upward Bound. As a result, the survey included both high schools and middle schools from which students were recruited during eighth grade.

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[1] Among the evaluations of Upward Bound conducted prior to 1990, Research Triangle Institute (RTI) undertook the largest and most comprehensive in the middle to late 1970s. The RTI study collected information about Upward Bound students from their school teachers and included target school staff in case study interviews. The study did not gather information about target schools per se, however, nor did it investigate the Upward Bound projects' effects on the target schools.

[2] The survey of target schools is part of the national evaluation of Upward Bound, a comprehensive five-year study of regular Upward Bound projects. The Planning and Evaluation Service in the U.S. Department of Education contracted with Mathematica Policy Research, Inc. to undertake the study. In addition to a survey of target schools, the study includes a survey of Upward Bound grantees, case studies of 20 Upward Bound projects, and a longitudinal study of the effectiveness of Upward Bound that tracks students randomly selected into Upward Bound and a control group. Seventy Upward Bound projects form the nationally representative sample for the effectiveness study and were used as the base for generating the sample of target schools.

The survey form consisted of a two-part questionnaire. The school principal completed one part of the questionnaire which focused on school climate and demographics The Upward Bound liaison at the school--a staff member identified by the Upward Bound project--completed the other part which included questions about the types of Upward Bound-related activities that school staff were engaged in, the intensity of the interactions between target school and Upward Bound staff, and perceptions of the program's effectiveness. An overall response rate of 96 percent was obtained. A description of the target school sampling methods and a copy of the questionnaire appear in Appendix A to this report.

2. About this Report

This chapter and those that follow each focus on results relevant to one of the four major questions that the survey was designed to address.

1. How do Upward Bound target schools compare with other schools in terms of poverty, racial and ethnic composition, and school climate?
2. To what extent are other precollege services available in the target schools served by Upward Bound?
3. To what extent do target schools interact with Upward Bound projects and what role do they have with respect to the Upward Bound program?
4. From the perspective of the target schools, what are the effects of Upward Bound on students and the schools, and how can the program be improved?

Throughout this report we present estimates from the target school survey that combine responses from the high schools and middle schools in the survey. To address the possibility that the grade level differences of middle and high schools is likely to change aspects of their relationship to Upward Bound, where possible we also have developed independent estimates for each level of school on key variables in the report.[3] For example, since the large majority of projects admit students into the program as ninth or tenth graders and 83 percent of all Upward Bound students are in grades 10 through 12, we might expect few middle schools to experience equal degrees of involvement with their Upward Bound projects as high schools (Fasciano and Jacobson 1995). Generally speaking, the exclusion of middle schools from the estimates based on all schools rarely changed the reported direction of results stated in the text and only marginally altered the numerical values. This is hardly surprising since the large majority (79 percent) of target schools are high schools. The independent estimates by level of school appear in Appendix B to this report.

We begin by presenting findings from our investigation into Upward Bound's "reach," or penetration, into the nation's schools and the characteristics that distinguish Upward Bound target schools. In the next section, we examine the number of target schools and students who attend those schools. This gives a sense of Upward Bound's scope and the number of students who, because they attend a target school, potentially have access to an Upward Bound project. In the subsequent section, we describe the target school environment on the basis of such characteristics as grade level, location, predominant race and ethnicity, the ratio of students to counselors and teachers, and problems such as student absenteeism and alcohol abuse. We also compare program penetration rates across schools to obtain information about which schools are most likely to be Upward Bound target schools.

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[3] High schools are defined in this report as schools with grade 10 or above, and middle schools are schools with at least grade 8 but no grade higher than 9. Based on this survey, only 21 percent of target schools in the nation are middle schools.

B. UPWARD BOUND'S REACH INTO THE NATION'S SCHOOLS

- Upward Bound projects select students from about 8 percent of the nation's schools that enroll students in grade 8 or above.
- The Upward Bound target schools enroll about 22 percent of *all students* in grades 8 to 12.
- Upward Bound serves less than 1 percent of the nation's students in grades 8-12 who meet the program's income eligibility criteria.

About 54,500 schools in the United States enroll students in grade 8 or above, and Upward Bound draws students from about 4,145 of these schools.[4] This corresponds to an overall "penetration rate" of nearly 8 percent of schools.[5] (Note that although Upward Bound projects can recruit students in grade 8, these students cannot be served by Upward Bound until completing the eighth grade, unless the projects provide evidence that high dropout rates prevail in an area.) Upward Bound's reach into the nation's schools becomes more substantial when viewed in terms of the number of students in grades 8-12 enrolled in the target schools--roughly the Upward Bound target grades. Using data from the U.S. Department of Education and the target school survey, we found that Upward Bound target schools enroll about 22 percent of *all students* in grades 8-12.[6] The discrepancy between the 8 percent penetration rate for schools and this higher rate for students is rooted in the fact that Upward Bound disproportionately serves schools such as urban public high schools which tend to have higher enrollments than schools in general.

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[4] The estimate of the total number of schools is based on a tabulation from the Schools and Staffing Survey (SASS) of 1990-91 (U.S. Department of Education, National Center for Education Statistics) and includes both public and private schools.

[5] This penetration rate reflects both the number of Upward Bound projects and the number of target schools that each Upward Bound project serves. Specifically, in 1991-92 there were 440 regular Upward Bound projects, which means that on average, Upward Bound projects draw students from about 9 target schools. Three-quarters of the projects draw students from 5 to 16 target schools.

[6] According to U.S. Department of Education data (Condition of Education 1994, Table 38-1), about 17.1 million students nationwide are enrolled in grades 8-12. We found from the target school survey that the target schools enroll about 4.2 million students, 3.7 million of whom are in grades 8-12.

The target school survey data also reveal how small the program is in light of the number of potentially eligible students.[7] Using March 1992 census data, we estimate that nationwide, about 4.7 million students in grades 8-12 have a family income of less than 150 percent of the poverty line--the Upward Bound *income* eligibility criterion. Upward Bound serves about 36,000 precollege age students annually, which means that the program serves less than 1 percent of all students in grades 8-12 who are income-eligible for the program. If we estimate the program's reach using just the population of income-eligible students enrolled in target schools, the program, on average, serves four percent of income-eligible students in those schools. Our estimates of the number of income-eligible students is clearly an upper bound of the number of potential Upward Bound participants--for example, many students who meet the income criteria may not want or need the intensive services that Upward Bound provides. However, it is apparent that Upward Bound serves only a small fraction of those who are potentially eligible for the program based on income.

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[7] Federal eligibility requirements include four elements: (1) the student is from a low income family (less than 150 percent of the poverty threshold) or neither parent may have completed a four-year college degree, (2) the student is a citizen or national of the United States, (3) the student has a need for academic support to pursue successfully a program of education beyond high school, and (4) and at the time of selection the student has completed 8th grade but not entered 12th grade and is at least 13 years old but not older than 19. Case studies and analyses of survey data collected from Upward Bound project directors suggest that many approaches are used to assess academic need. Some factors that are considered by Upward Bound projects when selecting students include grades in school and standardized test scores, school attendance and misbehavior in school, and the kinds of courses taken in school.

C. UPWARD BOUND TARGET SCHOOLS AND ALL SCHOOLS

- Upward Bound target schools are almost exclusively public schools; 80 percent are high schools; 60 percent are located in urban areas; nearly 40 percent have a free lunch eligibility rate of over 40 percent; about half are predominantly white, and more than 25 percent are predominantly African American; nearly 60 percent have more than 750 students.

- Compared with schools nationally, Upward Bound target schools are more likely to be public schools, high schools, urban schools, schools with high concentrations of low-income students, predominantly nonwhite (especially African American) schools, and large schools (more than 750 students).

- Counselors in Upward Bound target schools have higher caseloads than in public schools nationally; in contrast, the student-teacher ratio in the target schools is slightly lower than in all public schools.

- Two-thirds of the target schools identify themselves as "comprehensive public schools," nearly one- quarter identify themselves as "public schools of choice," and about one in six identify themselves as "public magnet schools." (These categories are not mutually exclusive.)

- Almost half of all target schools offer the entire sequence of math courses from Algebra I through calculus, while more than three-quarters of the schools offer biology, chemistry, and physics. In addition, almost 70 percent of the target schools offer at least one advanced placement course.

- Target school principals are more likely than principals nationally to consider student absenteeism, class cutting, and teen pregnancy a serious problem, and they are less likely to consider alcohol use a serious problem.

In this section, we look more closely at the schools served by Upward Bound. Using data from the target school survey and from the U.S. Department of Education, we compare Upward Bound target schools with all schools in terms of demographics and the schools' academic and social climate.[8]

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[8] The primary national data sources used here are the 1990-91 Schools and Staffing Survey and the Common Core of Data Public School Universe, 1991-92, both collected by the National Center for Education Statistics. Other sources are cited as appropriate. When contrasting Upward Bound target schools with all schools, it is important to keep in mind that some of the schools in the *all* group will include Upward Bound target schools. Given that the samples may overlap, we do not perform formal (continued...)

1. School Demographics

Table I.1 shows a number of target school characteristics--control, grade level, location, free lunch eligibility, race/ethnicity, and total enrollment--relative to national data. This tabulation reveals important information about the target schools:

- ***School Control.*** Almost all Upward Bound target schools--about 97 percent--are public schools. Nationally, only about two-thirds of schools with grade 8 or above are public.
- ***Grade Level.*** About 4 of 5 target schools are high schools, while 1 of 5 is a middle or junior high school.[9] Nationally, among public schools with grades 8 or above, there is a roughly even split between high schools and middle/junior high schools.
- ***Location.*** About 6 of 10 target schools are urban (located within a standard metropolitan statistical area, SMSA, as defined by the census bureau), while 4 of 10 are rural (not located within an SMSA). Nationally, the reverse is true: about 60 percent of all public schools with grade 8 or above are rural and 40 percent are urban.
- ***Predominant Race/Ethnicity.***[10] While 8 of 10 public schools nationally are predominantly white, this is true of only half the target schools. The target schools include many more predominantly African American schools than public schools nationally (28 percent versus 9 percent). There are also more target schools where other racial/ethnic groups--Asian, Native American, Hispanic, and mixed race/ethnicity-- predominate.
- ***Free Lunch Eligibility.*** Using free lunch eligibility rates as a proxy for school poverty, we found that Upward Bound target schools have higher concentrations of low-income students than do schools in general, which should not be surprising

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[8](...continued)
tests of statistical significance when contrasting estimates. Instead, we rely on subjective judgments concerning differences between the estimates.

[9] High schools are defined here as schools with grade 10 or above, and middle schools are schools with at least grade 8 but no grade higher than 9.

[10] For this analysis, at least 50 percent of the students in a school must be of a single race/ethnicity for us to classify the school as having a predominant race/ethnicity. The exception is Asian, for which only 25 percent of the students must be Asian for the school to be classified as Asian. Schools without a predominant race/ethnicity are classified as mixed. This classification scheme is consistent with that used in our analysis of the Upward Bound grantee survey data.

TABLE I.1

DEMOGRAPHIC CHARACTERISTICS OF UPWARD BOUND TARGET SCHOOLS

Type of School	Number of Target Schools	Distribution of Target Schools (Percent)	Distribution of All Schools (Percent)
All Target Schools	4,145	100	N/A
Control			
Public	4,031	97	65
Private	114	3	35
Grade Level			
High School	3,174	79	51
Middle	857	21	49
Location			
Urban	2,424	60	41
Rural	1,607	40	59
Free Lunch Eligibility			
0% - 19%	1,190	30	48
20% - 39%	1,284	32	30
40% - 100%	1,557	39	22
Predominant Race/Ethnicity			
African-American	1,140	28	9
White	1,978	49	79
Asian	102	3	1
Native American	99	3	1
Hispanic	305	8	5
Mixed	407	10	5
School Enrollment			
1 - 299	388	10	33
300 - 749	1,271	32	38
Over 750	2,370	59	29

N/A = Not Applicable

SOURCE: Target school data are from the 1993 Survey of Upward Bound Target Schools. National school data are from the 1990-91 Schools and Staffing Survey and the Common Core of Data Public School Universe, 1991-92, both collected by the National Center for Education Statistics.

Note: The predominant race/ethnicity of a school is based on at least 50 percent of the students in a school being reported as of a specific race or ethnic group. The exception is Asian, for which only 25 percent of the students must be reported as Asian for the school to be so classified.

> given the Upward Bound eligibility criteria.[11] Specifically, almost 40 percent of target schools are high-poverty schools (defined here as schools in which more than 40 percent of students are eligible for a free lunch), while just over 20 percent of all public schools with grade 8 or above fall into this category. Conversely, low-poverty schools are underrepresented in the target schools, compared with the national data.
>
> ***School Enrollment.*** Upward Bound target schools are larger than the comparable set of all public schools (schools with grades 8 or above). For instance, nearly 6 of 10 target schools have more than 750 students, compared with just under 3 of 10 schools nationally.

While Table I.1 shows that Upward Bound disproportionately serves certain "types" of target schools--for example, public schools, high schools, urban schools, and high-poverty schools--we can get a better sense of the differential rates at which various categories of schools are served by calculating *penetration rates* for different school types. Because penetration rates are the share of all schools in a category that are served by Upward Bound, they also give the likelihood that students in various types of schools have access to an Upward Bound project. Table I.2 shows how Upward Bound penetration rates vary by the same school characteristics in Table I.1.

The penetration rates by school characteristics further reveal the degree to which Upward Bound is targeted at public schools, high schools, urban schools, high-poverty schools, and predominantly nonwhite schools. Penetration rates differ most according to school control: public schools are over 10 times more likely than private schools to be target schools. High schools are over three times more likely to be target schools than are middle schools (18 percent versus 5 percent), most likely because high schools typically have higher concentrations of students within the Upward Bound target age

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[11] Students qualify for free lunch if their family income is less than 185 percent of the poverty line or if their family is eligible for AFDC or food stamps.

TABLE I.2

TARGET SCHOOL PENETRATION RATES, BY SCHOOL TYPE

Type of School	Penetration Rate
All Target Schools	8%
Control	
Public	11%
Private	1%
Grade Level	
High School	18%
Middle/Junior High	5%
Location	
Urban	17%
Rural	8%
Free Lunch Eligibility	
0% - 19%	7%
20% - 39%	13%
40% - 100%	20%
Predominant Race/Ethnicity	
African American	38%
White	7%
Asian	22%
Native American	22%
Hispanic	16%
Mixed	24%
School Enrollment	
1 - 299	3%
300 - 749	9%
Over 750	23%

SOURCE: Target school data are from the 1993 Survey of Upward Bound Target Schools. National school data are from the 1990-91 Schools and Staffing Survey and the Common Core of Data Public School Universe, 1991-92, both collected by the National Center for Education Statistics.

Note: The predominant race/ethnicity of a school is based on at least 50 percent of the students in a school being reported as of a specific race or ethnic group. The exception is Asian, for which only 25 percent of the students must be reported as Asian for the school to be so classified.

range. The penetration rate in urban schools (17 percent) is about twice that of rural schools (8 percent), in part reflecting the higher concentration of Upward Bound projects in urban areas.[12]

Given the Upward Bound low income eligibility criterion, we were not surprised to find that high-poverty schools are more likely than low-poverty schools to be served by Upward Bound. Specifically, schools where more than 40 percent of the students are eligible for a free lunch are nearly three times as likely to have students in Upward Bound than schools where less than 20 percent of the students are similarly eligible. In terms of school enrollment, larger schools (more than 750 students) are several times more likely than smaller schools to be Upward Bound target schools. This is probably because Upward Bound concentrates on serving urban, public high schools, and these schools tend to be large.

Finally, we found differences in penetration rates according to the predominant race/ethnicity of target schools. Most notably, African American schools are more than five times more likely than predominantly white schools to have students participating in Upward Bound (38 percent versus 7 percent). In addition, 16 percent of predominantly Latino schools have students participating in Upward Bound, while between 22 and 24 percent of Asian, Native American, and "mixed" target schools participate in Upward Bound.

2. Target School Academic and Social Climate

Demographics alone cannot fully describe the target schools. To understand the experiences of students entering Upward Bound, we also need to understand the target school academic and social climate. In this section, we explore this climate, focusing on student-counselor and student-teacher ratios, college attendance rates, target school emphasis and course offerings, and problems in the schools. Where national data are readily available--for all measures except school emphasis and course offerings--we also compare the target schools to schools generally. In making national comparisons, we exclude private schools from the analysis because nearly all target schools are public schools. Also, given the different challenges faced by urban and rural schools, we have separated target schools and all schools according to location. In addition, to ensure comparability between our data and the national Schools and Staffing Survey (SASS) data, we included only "secondary" schools (as defined by the survey) in the analysis.[13]

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[12] According to the Upward Bound grantee survey, two-thirds of Upward Bound projects are urban, and one-third are rural.

a. Academic Climate

Counselors in Upward Bound target schools have higher caseloads than counselors in schools generally. As shown in Table I.3 , a target school guidance counselor works with about 70 percent more students. Readers should note that this comparison includes middle schools since we could not disaggregate the national data on secondary schools. We assume that middle schools have lower student-counselor ratios than high schools. Therefore, we expect their inclusion to exaggerate the difference in student-counselor ratios since middle schools are underrepresented among target schools. Nonetheless this finding is congruent with what we would expect according to the requirements outlined in the federal regulations for Upward Bound. That is, when selecting grantees, the U.S. Department of Education uses the ratio of students to counselors as a measure of need. However, this difference between target schools and all U.S. public schools does not extend to student-teacher ratios; in fact, among both urban and rural schools, Upward Bound target schools have a slightly lower student-teacher ratio than do all schools.

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[13] The Schools and Staffing Survey, public release data, defines schools according to three grade levels: secondary, combined, and elementary. Secondary schools are defined as schools that enroll students in grade 7 or above, but not below grade 7. Combined schools enroll students in grade 8 or above and grade 7 or below. Elementary schools enroll students in grade 6 or below, but not above grade 8. We adopt these definitions so that we may compare the target school data with information on all schools in the nation collected through the 1990-91 Schools and Staffing Survey. We exclude combined schools from the analysis here because there are too few urban or rural combined target schools to make useful comparisons. For one item--the student-teacher ratio--we use national data from the Common Core of Data; there, our analysis is based on all schools with grades 8 or higher.

College attendance rates in Upward Bound target schools are similar to those in all schools (Table I.3). The wording for this item in the target school survey differs from that in the SASS, but we suspect that student-teacher ratios; in fact, among both urban and rural schools, Upward Bound target schools have a slightly lower student-teacher ratio than do all schools.

College attendance rates in Upward Bound target schools are similar to those in all schools (Table I.3). The wording for this item in the target school survey differs from that in the SASS, but we suspect that here it does not significantly affect the interpretation of the data.[14] Among urban secondary schools, we find that target schools and all schools are quite similar; that is, about 6 of 10 graduates attend a two- or four-year college. Among rural secondary schools, the target schools tend to have slightly lower college attendance rates than schools in general (48 percent versus 58 percent). On the surface it may be puzzling that regardless of their higher levels of poverty, target schools report relatively similar college attendance patterns as all schools. In fact, there is only modest variation in the reported college attendance rates of schools with high and low concentrations of poverty.[15]

Comprehensive public schools dominate the target school landscape. As shown in Table I.4, two-thirds of target school liaisons described their schools as a comprehensive public school. Nearly one-quarter of target schools said they are public schools of choice, while one of six schools are public

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[14] Principals in the target school survey were asked to indicate the percentage of graduates attending two- or four-year colleges, while principals in the SASS were asked to indicate the percentage applying for admission to two- and four-year colleges.

[15] Data from SASS indicate that secondary schools with fewer than 20 percent of students receiving free or reduced-price lunches report an average of 58 percent of 12th graders applying to college while schools with 40 percent or more of students receiving these lunches report a slightly lower college application rate of 53 percent.

TABLE I.3

STUDENT-STAFF RATIOS AND COLLEGE ATTENDANCE RATES, UPWARD BOUND TARGET SCHOOLS AND ALL SCHOOLS (PUBLIC SCHOOLS)

	Urban		Rural	
Characteristic	UB	All Schools	UB	All Schools
Student-Staff Ratios				
Student-Counselor Ratio	538	343	446	258
Student-Teacher Ratio[a]	17	18	15	16
College Attendance				
Percent of Students Attending/Applying to Two- and Four-Year Colleges	59	57	48	58

SOURCE: With the exception of the student-teacher ratio, estimates in this table are based on national data from the Schools and Staffing Survey 1990-91. The student-teacher ratio comparisons are based on public schools with grades 8 or above using data from the Common Core of Data, 1991-92.

TABLE I.4

TARGET SCHOOL EMPHASIS

Indicator of School Emphasis	Number of Target Schools	Distribution of Target Schools (Percent)
Comprehensive Public School	2690	67
Public School with Special Curriculum	492	12
Public Magnet School	694	17
Public School of Choice	915	23
Technical or Vocational School	153	4
Indian Reservation School	81	2

NOTE: Percentages do not sum to 100 percent because the categories are not mutually exclusive.

magnet schools. Upward Bound also draws students from a small number of Indian reservation schools and vocational or technical schools.

While we do not have national data on course offerings, the target high schools appear to offer many of the courses we would expect to find in high schools generally, including advanced placement courses (Table I.5). Among high schools, it appears that nearly all target schools offer Algebra I, Algebra II, and geometry. Over 80 percent of the schools offer trigonometry, and about 65 percent offer precalculus. Almost half of all target high schools offer the entire sequence of courses from Algebra I through calculus. Many of the high schools offer biology, chemistry, and physics, and more than three-quarters offer all three. Just over 70 percent of high schools claimed to offer at least one advanced placement course, although it appears that respondents' interpretation of advanced placement (AP) courses was not always limited to the AP program sponsored by the College Board. Among high schools that offer one or more advanced placement courses, the most likely to be offered are English and math, and the least likely is a foreign language. Of course, the fact that these advanced courses are offered in the schools does not mean that they enroll large numbers of students.

b. Social Climate

To assess the social climate, we asked school principals to rate the severity of a variety of potential school problems (Table I.6). The overall impression created by principals' reports of problems is that few stand out as particularly serious. Those that appear to distinguish target schools from all schools include student absenteeism, class cutting, teen pregnancy, and alcohol use. Target school principals are more likely than principals in all schools to consider student absenteeism, class cutting, and teen pregnancy serious problems. On the other hand, principals' reports suggest that alcohol use is a less serious problem than in all schools. In part, this may reflect the generally lower incidence of alcohol use among African American teenagers than among white teenagers (U.S.

TABLE I.5

COURSE OFFERINGS IN TARGET SCHOOLS
(High Schools Only)

Course Offerings	Percentage of High Schools
Math	
Algebra I	100%
Algebra II	99
Geometry	98
Trigonometry	83
Pre-calculus	65
Calculus	70
Science	
Biology	100
Chemistry	99
Physics	95
Computer Programming	68
Advanced Placement	
Any	73
Type of Course, Among Schools Offering at Least One AP Course	
Science	64
Math	76
English	81
History	66
Foreign Languages	39

Note: High schools are defined as any school offering grade 10 or above.

TABLE I.6

SOCIAL CLIMATE IN UPWARD BOUND TARGET SCHOOLS AND ALL SECONDARY PUBLIC SCHOOLS

(Percent of Principals Reporting Problem as "Serious")

	Urban		Rural	
Potential School Problems	UB	All Schools	UB	All Schools
Principals' Perceptions of Problems: (Percent Reporting Problem as "Serious")				
Student absenteeism	23%	16%	18%	10%
Class cutting	13	5	4	0
Physical conflicts among students	3	2	1	1
Teen pregnancy	17	8	17	5
Robbery/theft	2	1	1	1
Vandalism	3	1	1	0
Use of alcohol	5	14	12	15
Use of illegal drugs	1	5	4	2
Possession of weapons	0	1	0	0
Physical abuse of teachers	1	0	0	0
Verbal abuse of teachers	2	3	2	0

NOTE: Estimates in this table are based on national data from the Schools and Staffing Survey 1990-91 and are limited to secondary schools--schools that enroll students in grade 7 or above, but not below grade 7.

Department of Health and Human Services, 1992), and predominantly African American target schools accounting for a disproportionate share of the enrollment in the target schools.

D. CONCLUSIONS

The fact that Upward Bound is limited to serving students from only a segment of secondary schools raises several important questions about the program's reach into the nation's schools. Since only students in the target schools can potentially access a Upward Bound project, these questions about Upward Bound's reach are particularly critical. Several important findings emerged in this chapter. First, while Upward Bound serves only 10 percent of schools with Upward Bound aged students, these schools enroll over one-fifth of the nation's students in grade 8 or above. Second, the Upward Bound target schools are almost exclusively public schools and are primarily high schools. These schools are also more likely than other secondary schools to be located in an urban area, serve predominantly low income students (based on free lunch eligibility), be predominantly nonwhite, and have higher student enrollments.

In the remainder of this report, we take a closer look at the target schools. In Chapter II we look at landscape of precollege programs in the schools (including Upward Bound), while Chapters III and IV focus more specifically on ways in which Upward Bound affects the target schools.

II. PRECOLLEGE PROGRAMS IN TARGET SCHOOLS: AVAILABILITY AND PARTICIPATION

Upward Bound is one of many precollege programs designed to prepare and motivate disadvantaged students for college. However, such programs are not equally available in all schools. In some target schools, Upward Bound is the only program of its kind; in others, it is one of several. Examining the availability, size, and other key features of all precollege programs in the target schools is important for at least two reasons. First, we can more fully understand why students choose Upward Bound if we know something about the alternatives to it. Second, if Upward Bound serves just a few students in a target school or is one of many programs competing for the attention of teachers, counselors, and administrators, we might expect it to have a smaller impact on the school as a whole than if it played a more prominent role. We address the schools' perceptions of Upward Bound's effects in Chapter IV. Here, we lay the foundation for this analysis by describing the general landscape of precollege programs in the target schools and exploring factors that influence students decisions to participate in Upward Bound or other precollege programs.

A. THE PRECOLLEGE PROGRAM LANDSCAPE IN THE TARGET SCHOOLS

- The median target school has just 8 Upward Bound participants, which means that Upward Bound serves just a small fraction of low-income students in most target schools.
- 70 percent of target schools have *at least* one precollege program besides Upward Bound; most of these schools have *exactly* one other program.
- Talent Search is the most common alternative program and is available in more than half the target schools.
- Other precollege programs typically enroll more students than does Upward Bound.
- School staff suggest that Upward Bound participants closely resemble participants in other precollege programs in most of the ways we examined except for grade point average.

This first section provides an overview of precollege programs in the target schools, examining the number of students who participate in Upward Bound, the number of other precollege programs, the number of students who participate in these other programs, and the extent to which Upward Bound participants are similar to participants in these alternative programs.

1. Number of Upward Bound Students

Just a handful of students in the typical target school participates in Upward Bound. The median target school reported 8 participating students, and nearly three-quarters of the target schools reported fewer than 15 participants. These low numbers mean that in most target schools, Upward Bound serves a small fraction of the total student body: about half the target schools in our survey said that less than 1 percent of their students participate in Upward Bound, and 80 percent of schools reported a participation rate of under 2 percent. Even at the extreme, schools do not have a high proportion of students in Upward Bound--for instance, 99 percent of schools reported that fewer than 10 percent of their students participate in the program.

The findings on participation of potentially eligible students show a similar pattern. Not all students in the target schools meet the federal eligibility requirements for Upward Bound. Yet, even if we look at Upward Bound participants as a fraction of students qualifying for free or reduced- priced lunches--a rough proxy for Upward Bound income eligibility--only 4 percent of these students on average participate in Upward Bound.[1]

Compared with high schools, middle schools reported fewer students currently participating in Upward Bound. As shown in Figure II.1, the median middle school has three Upward Bound participants (0.4 percent of the target school total enrollment) compared with nine participants in the high schools (1.0 percent of the target school total enrollment). One reason for this difference is that federal requirements for the most part restrict Upward Bound eligibility to students who have completed grade 8, thereby excluding many middle school students from the program. Middle schools were also much more likely than high schools to report no Upward Bound participants (or not to

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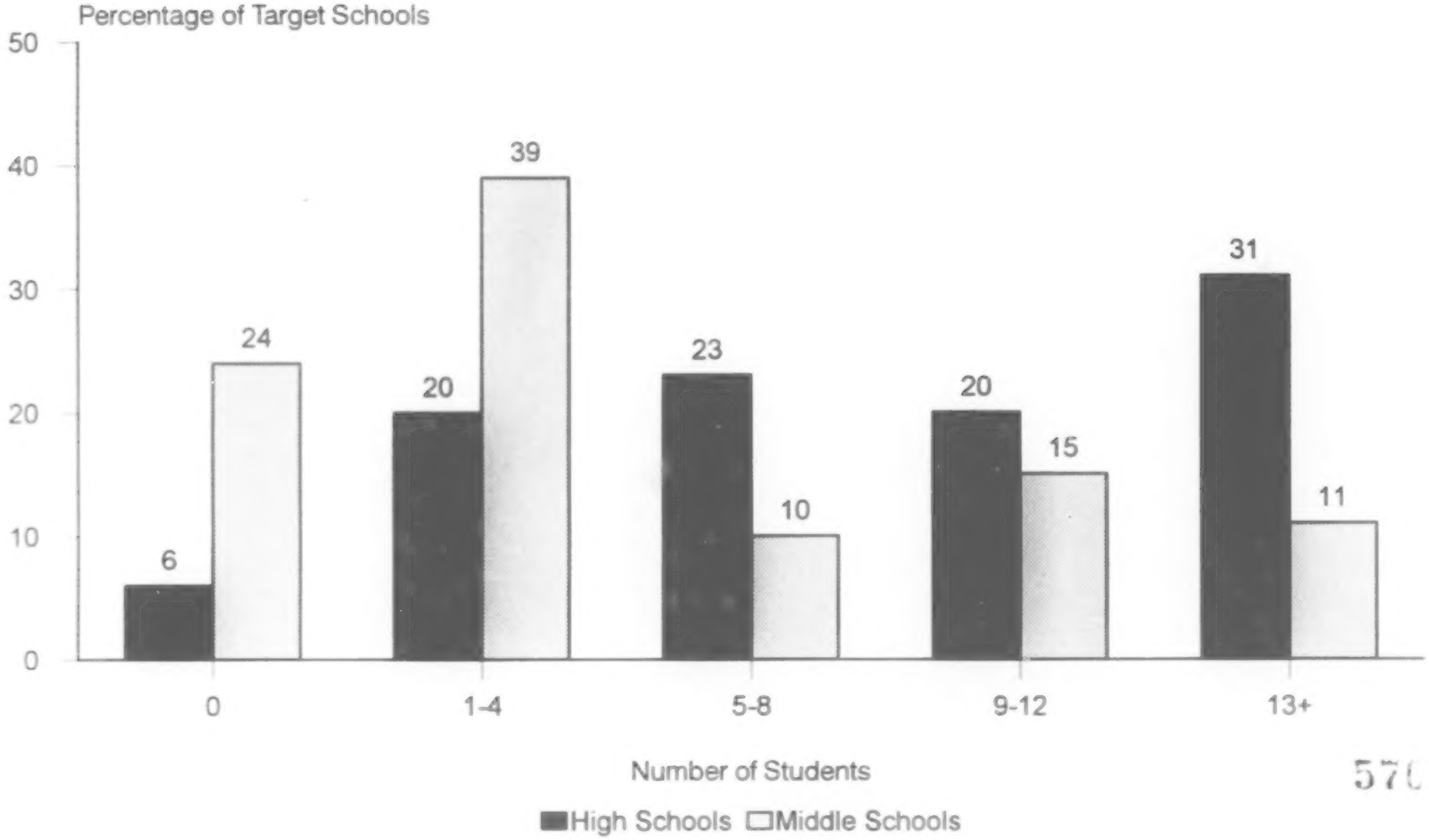
[1] Students qualify for free or reduced-priced lunch if their family income is below 130 percent or 185 percent of the poverty line, respectively. Students whose families are eligible for AFDC or food stamps automatically qualify for free lunches. The 185 percent of poverty threshold is higher than the 150 percent threshold used for Upward Bound eligibility (U.S. House of Representatives, 1994).

FIGURE II.1

STUDENT PARTICIPATION IN UPWARD BOUND



respond to the question), probably because students often begin Upward Bound the summer after middle school and so would not attend the target school while in Upward Bound.[2]

One reason for the low numbers of Upward Bound students is that Upward Bound projects often work with many target schools and hence select a small number of students from each school. To explore this possibility, we classified target schools according to the number of target schools their Upward Bound project works with. Panel A in Figure II.2 shows that nearly half of all target schools (47 percent) are 1 of 13 or more target schools working with an Upward Bound project, and three-quarters of all target schools are 1 of 9 or more target schools working with a project. Figure II.2, Panel B, shows the median number of Upward Bound participants per school according to the number of target schools their Upward Bound project works with.[3] As expected, the median number of Upward Bound participants drops as the number of schools working with a project increases--from a median of 20 students when a target school is 1 of 4 or fewer schools working with a project to a median of 5 students when the target school is 1 of 13 or more schools.

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[2] There is some potential for ambiguity in the reported number of Upward Bound students. Respondents were asked how many students from the school are currently participating in Upward Bound. Yet, some middle schools reported positive enrollments even though students are usually not eligible to participate in the program until after grade 8. If the schools in the project's target area have an unusually high dropout rate, however, projects can serve youngsters prior to completion of the eighth grade. We suspect, however, that some liaisons in middle schools interpreted the question as the number of students from the school who subsequently enrolled in Upward Bound. The resulting ambiguity would tend to skew enrollment rates towards slightly larger numbers, and so even this does not change the basic conclusion that Upward Bound serves a small fraction of the student body in most schools. Middle schools were also much more likely to skip the enrollment question (41 percent of middle schools left the question blank versus 7 percent of high schools).

[3] For this analysis, we assumed each target school works with just a single project. This simplification changes our results only slightly as only about 5 percent of target schools have multiple affiliations. If a target school did work with more than one project, we associated the target school with the project in the sample that had the highest selection probability.

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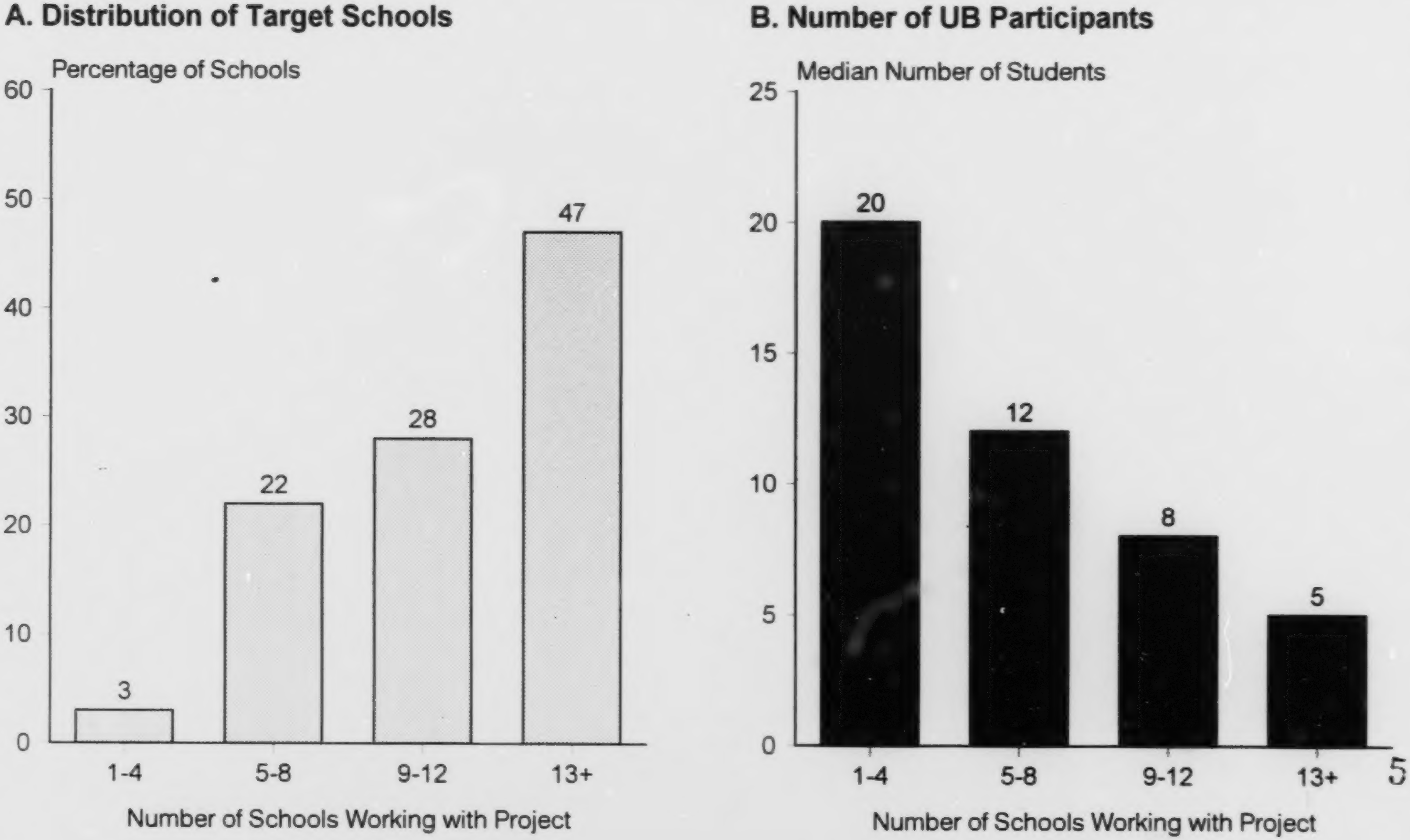
FIGURE II.2

DISTRIBUTION OF TARGET SCHOOLS AND NUMBER OF UB PARTICIPANTS,
BY NUMBER OF TARGET SCHOOLS WORKING WITH PROJECT


A. Distribution of Target Schools

B. Number of UB Participants

572

573

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2. Alternative Precollege Programs

Alternative precollege programs are available in most target schools and typically serve more students than Upward Bound. These findings are based on responses to a question that asked whether target schools have students participating in three specific precollege programs besides Upward Bound--Talent Search, I Have a Dream, and Career Beginnings--and also allowed schools to write in two other precollege programs.[4] Figure II.3 shows the *number* of alternative precollege programs available in the target schools. Seventy percent of schools reported at least one precollege program besides Upward Bound, and almost half of all target schools said they offered one other precollege program.

Table II.1 shows the fraction of schools reporting each type of precollege program and the typical (median) number of participants in each program. Talent Search, the most common and largest alternative program, is available in nearly 57 percent of all target schools and has a median size of 26 participants. A sizable minority of schools (nearly 30 percent) said they had at least one precollege program not listed on the survey (median size 10-15 students). These other programs are best characterized by their diversity; over 130 different state and local programs were mentioned by the survey's 700-plus respondents. I Have A Dream and Career Beginnings are far less prevalent than Talent Search, available in just 4 percent and 3 percent of target schools, respectively.

Compared with Upward Bound, the alternative precollege programs typically serve more students. In the typical school with an alternative precollege program, the largest alternative program has three

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[4] Talent Search, another federal TRIO program, provides tutoring and counseling services to low income middle and high school students. Talent Search's relatively low intensity is reflected in its annual per student costs, which are less than one sixth of Upward Bound's. Under the I Have a Dream (IHAD) model, a private sponsor guarantees partial college tuition to classrooms or grades in disadvantaged middle schools, and many IHAD projects contribute counselors and mentoring assistance. Career Beginnings provides academic, career, and support services to underperforming, low-income juniors and seniors.

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FIGURE II.3

NUMBER OF ALTERNATIVE PRECOLLEGIATE PROGRAMS IN THE TARGET SCHOOLS

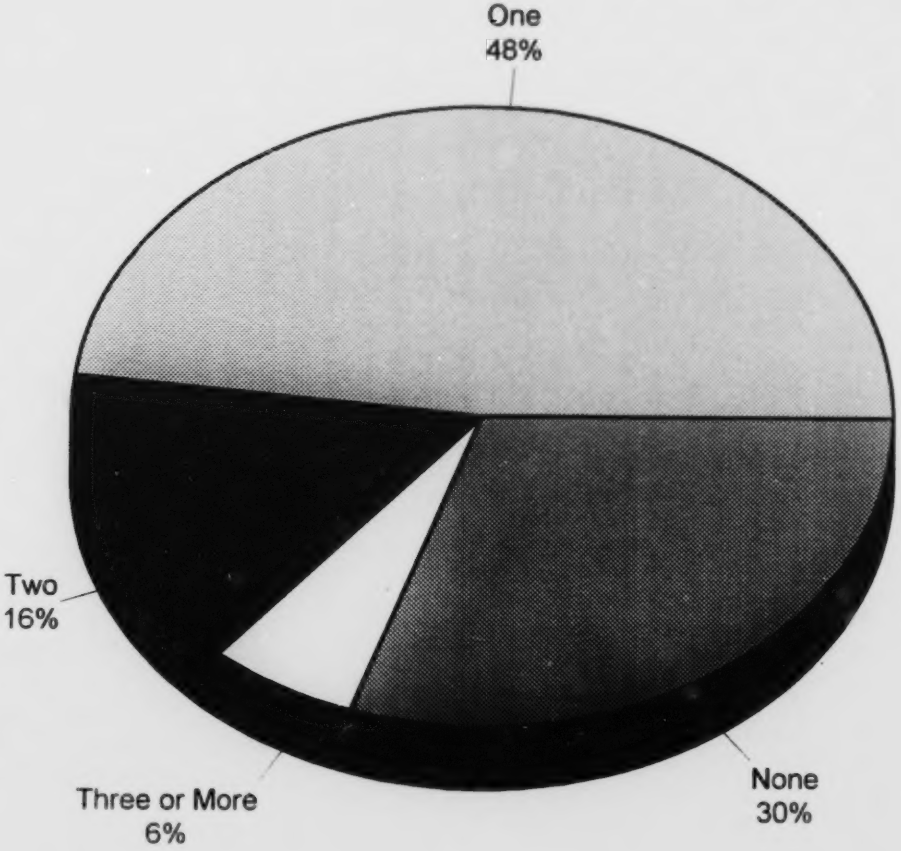

TABLE II.1

AVAILABILITY AND SIZE OF PRECOLLEGE PROGRAMS IN THE TARGET SCHOOLS

	Percent of Schools Offering Program	Median Program Size	Largest Precollegiate Program Among Target Schools with an Alternative Program[a]
Upward Bound	100 %	8	20 %
Alternative Programs			
Talent Search	57	26	56
I Have A Dream	4	6	1
Career Beginnings	3	10	1
Other Program #1	30	14	17
Other Program #2	10	10	4

[a] Percent of schools in which listed program is the largest precollegiate program, among schools having at least one alternative program. Numbers may not sum to 100% due to rounding.

times as many participants as Upward Bound. Further, the largest alternative precollege program has more participants than Upward Bound in about 80 percent of all schools having an alternative program (Table II.1, Column 3). Figure II.4 shows the largest precollege program in all target schools, including schools that have no alternative programs. Upward Bound is the only precollege program in 29 percent of schools, and hence the largest program by default. In another 14 percent of schools, it is larger than all alternative programs. Talent Search is the largest precollege program in 40 percent of all target schools.[5]

The availability of alternative programs varies somewhat if schools are separated by grade level and location (Appendix Table B.1). Talent Search is more common in the middle schools than in high schools; it is available in 67 percent of middle schools compared with 54 percent of high schools. This is at least partly because Talent Search targets a younger group than Upward Bound does--students become eligible for Talent Search at age 12.

3. Comparison Between Participants in Upward Bound and Other Programs

Although many target schools offer precollege programs other than Upward Bound, a key question is whether these other programs are meaningful options for potential Upward Bound participants. The answer depends in part on which students these other programs target. A program is most relevant as an option if it targets the same students as Upward Bound. To examine this issue, we asked target school liaisons to compare Upward Bound participants to participants in the largest alternative program in terms of race/ethnicity, gender, grade point average, motivation to attend college, and likelihood of graduating. As shown in Figure II.5, the share of schools reporting that

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[5] In about 3 percent of target schools Upward Bound is equal in size to another precollegiate program. These 3 percent of schools are included in the 44 percent of schools in which Upward Bound is considered the largest program.

FIGURE II.4

LARGEST PRECOLLEGIATE PROGRAM IN THE TARGET SCHOOLS

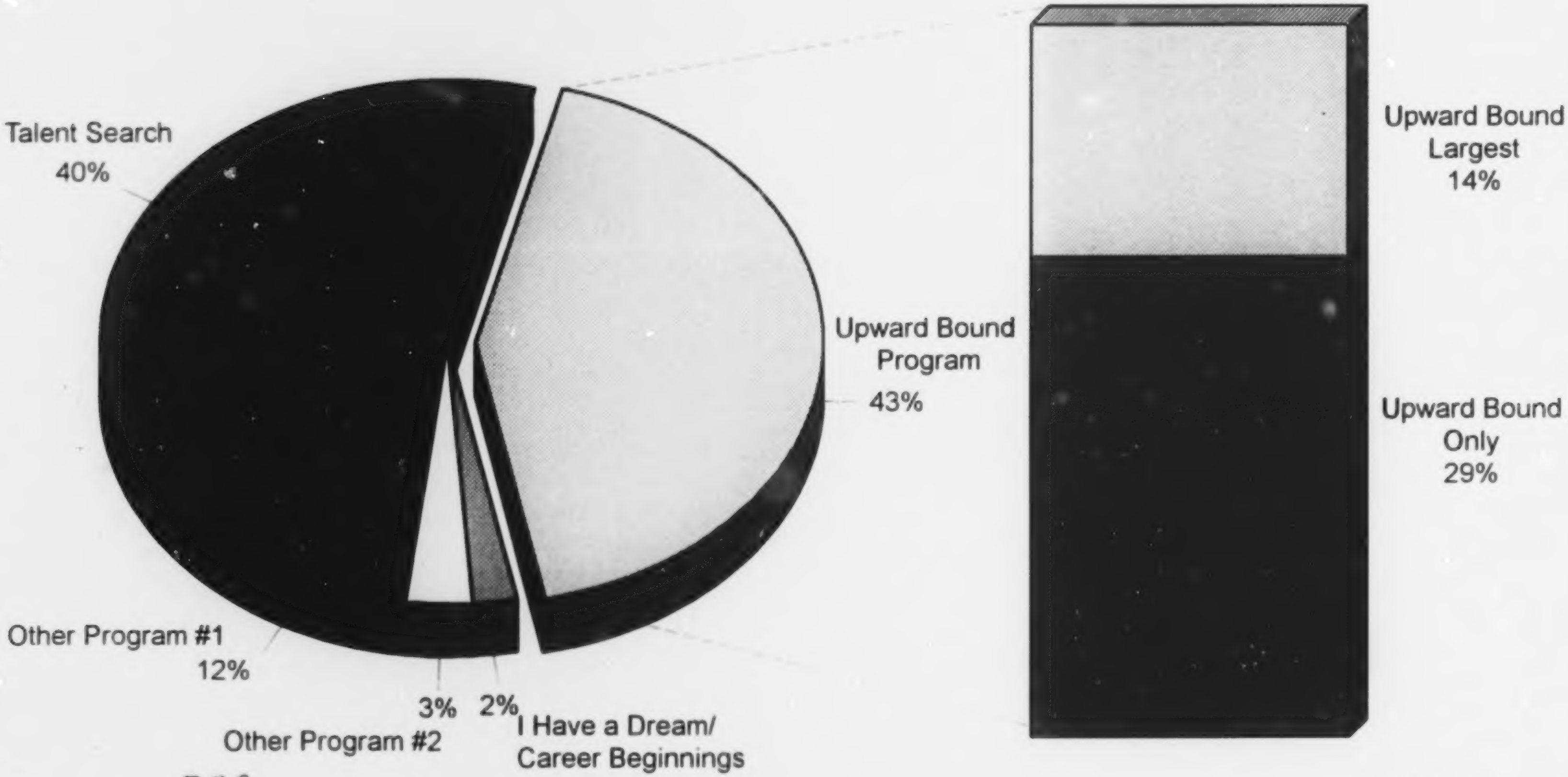
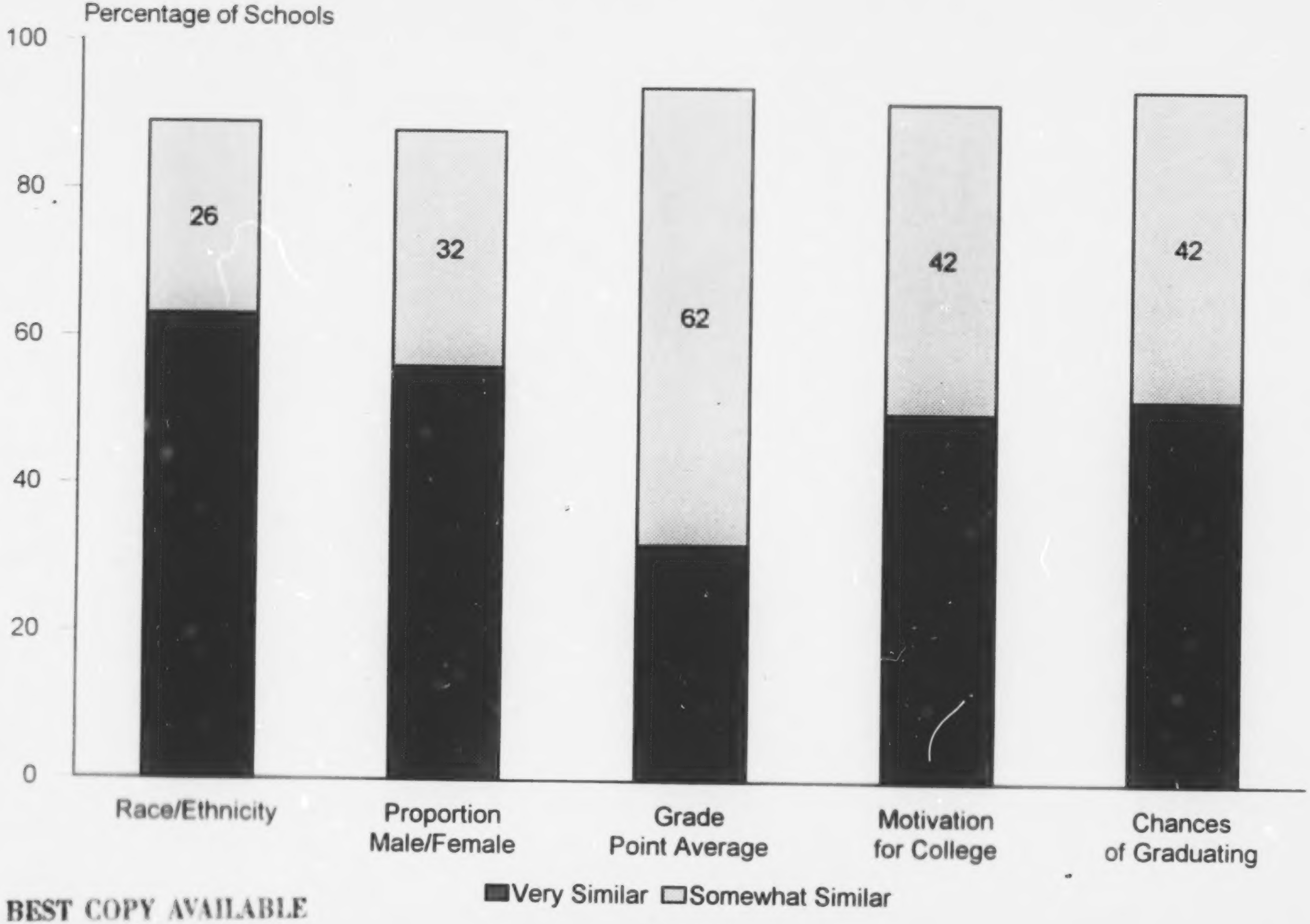


FIGURE II.5

UB PARTICIPANTS VERSUS LARGEST ALTERNATIVE PROGRAM PARTICIPANTS



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students are "very similar" ranged from about 50 percent to 63 percent for all dimensions except grade point average. Only 32 percent of schools said Upward Bound students are "very similar" to participants in other programs in terms of grade point average. This would seem to indicate that grade point average is a distinguishing characteristic of Upward Bound students vis-a-vis students in the largest alternative program. Given the wording of the survey question, however, we do not know whether Upward Bound tends to serve students with higher or lower grade point averages than do these other programs.[6] When we include "somewhat similar" responses in our analysis, the fractions range from 88 percent to 93 percent for all dimensions including grade point average. While inconclusive, these data would seem to support the idea that the alternative programs target a population that is fairly comparable to Upward Bound students, and that many students considering Upward Bound may therefore also have other programs from which to choose.

Another issue related to student choice is whether Upward Bound participants are allowed or encouraged to participate in other precollege programs. In many cases, this depends on the policies of the precollege programs. For instance, Upward Bound participants cannot participate in Talent Search because U.S. Department of Education regulations prohibit concurrent enrollment the two programs. We gauged policy on concurrent enrollment in multiple programs by including a survey question on whether Upward Bound students are encouraged or allowed to participate in alternative precollege programs. More than 70 percent of respondents said that Upward Bound students are encouraged to participate in other precollege programs, 18 percent said that they are neither encouraged nor discouraged, 5 percent said they are not encouraged to participate in other programs, and 7 percent said that Upward Bound students are not allowed to participate in other precollege programs. These results should not be interpreted as projects disregarding federal rules for Upward Bound and Talent Search since the responses refer to general school policy, not the specific rules governing individual programs. It is also possible that respondents were reflecting school policies related to sequential as opposed to concurrent participation in more than one precollege program.

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[6] Respondents choices were very similar, somewhat similar, not at all similar, or don't know. As a result, the survey does not tell us *how* participants in these other programs differ from Upward Bound participants.

B. NONPARTICIPATION OF ELIGIBLE STUDENTS

- The median target school reported having between 26 and 50 students who are eligible for Upward Bound but who do not participate in any precollege program--about 5 times the number of Upward Bound participants.
- In about 40 percent of schools, the number of Upward Bound applicants turned away from the program is equal to or greater than the number of students selected to participate. This number increases to 66 percent in middle and junior high schools.
- By far, the most common explanation for the nonparticipation of eligible students in Upward Bound is that they do not apply for the program.
- Based on the number of applicants who are turned away and the number of eligible nonparticipants, there is evidence of unmet demand in many schools. However, many unserved students may not want to participate in Upward Bound, and Upward Bound projects may not want to work with the students they turn away.

Despite the availability of precollege programs, many eligible students do not participate in Upward Bound or other similar programs. In this section, we examine the number of eligible nonparticipants and the reasons for their nonparticipation. We also consider the extent to which nonparticipation reflects unmet demand for Upward Bound in the target schools.

1. Number of Eligible Nonparticipants

The survey asked the Upward Bound liaisons to estimate the number of students who are eligible for Upward Bound but not participating in any precollege program. Almost all respondents--95 percent--reported some eligible nonparticipants. Figure II.6 shows that about one-third of schools reported fewer than 25 eligible nonparticipants, just under one-quarter reported between 26 and 50 eligible nonparticipants, and the remaining schools reported having more than 50 eligible nonparticipants. Most schools reported far fewer eligible nonparticipants than one might expect based on the number of students who qualify for free and reduced-price lunches.[7]

While the number of unserved eligible nonparticipants in the typical school is small, the number of Upward Bound participants is generally smaller. For instance, the median target school reported 5 times as many eligible nonparticipants as students in Upward Bound.[8] In the median middle school, this number jumps to nearly 8 times the number of Upward Bound participants, which is consistent with our earlier finding of lower numbers of Upward Bound participants in middle schools.

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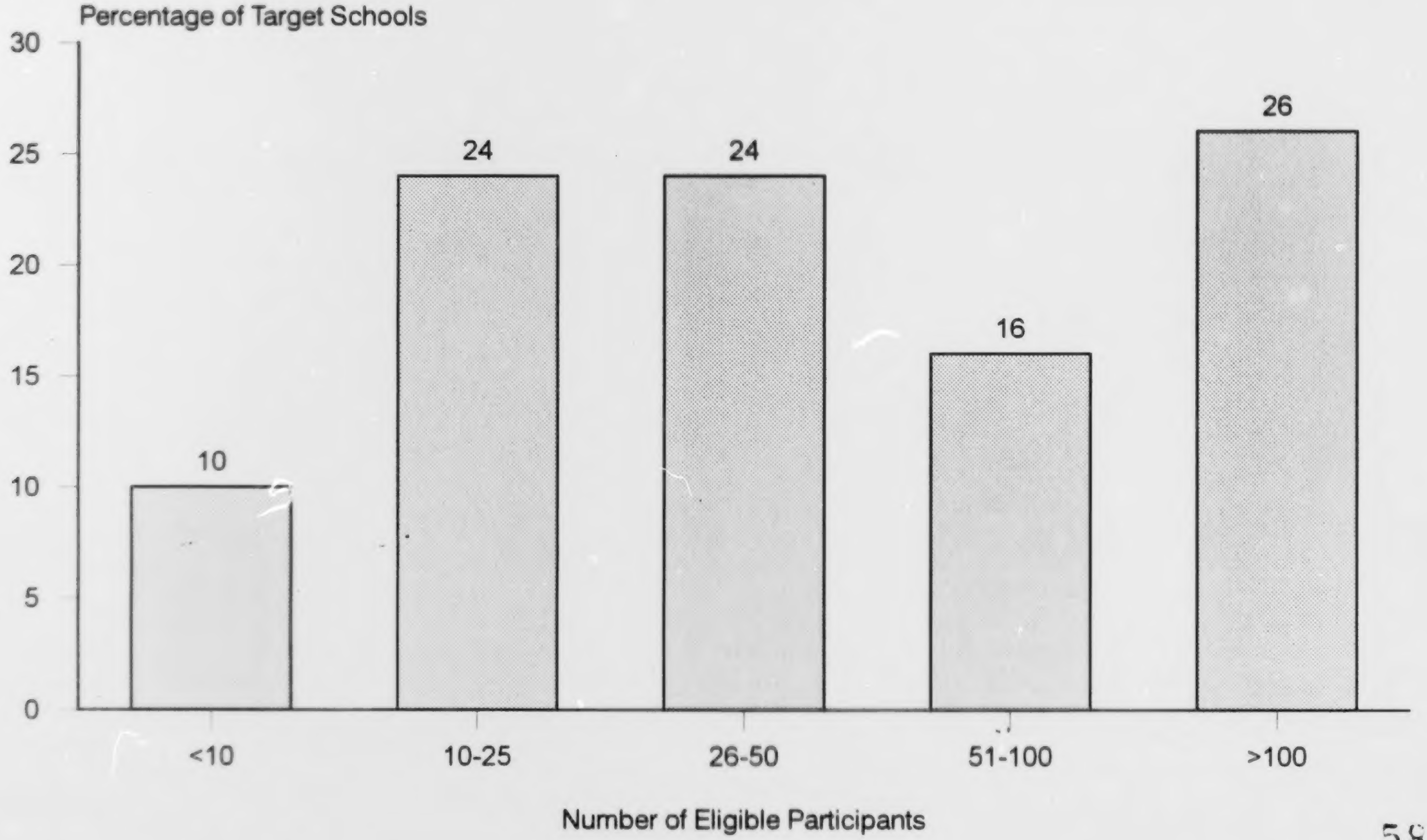
[7] At first glance, the fact that most schools reported fewer than 100 eligible nonparticipants may seem surprising, since, as we saw in Chapter I, Upward Bound serves a small fraction of free/reduced-price eligible students in most schools. A number of factors, however, help explain this disparity: (1) the survey question asks for the number of students not participating in any precollegiate program, not just Upward Bound, (2) it asks for the number of students "eligible for your Upward Bound project," not those who meet the federal eligibility requirements, so the responses are probably based on the subset of federally eligible students who also meet more stringent, project-specific requirements, (3) free/reduced-price lunch eligibility includes some students whose family income is between 150 and 185 percent of poverty and who thus do not meet the federal Upward Bound income guidelines, and (4) some free/reduced-price lunch eligible students do not meet the federal grade level and academic need eligibility requirements for Upward Bound.

[8] The survey question asked liaisons to give the number of eligible nonparticipants in five ranges--less than 10, between 10 and 25, between 26 and 50, between 51 and 100, and over 100. In computing the ratios described in this paragraph, we first recoded each of these responses to the midpoint of each range. For the top category ("over 100"), we assumed 125 eligible nonparticipants. Our approach probably underestimates the number of eligible nonparticipants because the top category is open-ended, and over one-quarter of target schools fall into this category.

FIGURE II.6

NUMBER OF UPWARD BOUND-ELIGIBLE STUDENTS NOT SERVED BY ANY PROGRAM



2. Reasons for Nonparticipation

There are many reasons why eligible students may not participate in an intensive intervention such as Upward Bound. One possibility is that they apply for the program but are turned down--perhaps because of limited openings or because the program sees them as a "bad fit." Another possible reason is that they do not want to participate--for example, they may not want to make the commitment or may prefer to work during the summer. In exploring the reasons for nonparticipation, we begin with the explanations offered by liaisons, and we then look at data on the number of students who apply for the program but are turned down.

Liaisons were asked to rate the importance of five possible reasons that eligible students do not participate in Upward Bound.[9] Table II.2 shows the percent of respondents who said each reason is a "moderate" or "major" factor for nonparticipation, by location and grade level, and for all schools. By far, the reason cited most consistently is that eligible students do not apply for the program, with nearly four-fifths of the schools saying that this is a moderate or major factor. The other four factors were rated moderate or major factors for nonparticipation by between 21 percent and 32 percent of schools. The fact that many students don't apply would seem to indicate that a lack of interest or time among many eligible students is at least partly responsible for their nonparticipation. (This conclusion is bolstered by the fact that liaisons in 28 percent of schools reported that students' declining acceptance is a moderate or major reason for nonparticipation.) On the other hand, some students may not apply because they do not know about the program. Only a third of school liaisons, however, reported lack of awareness of the programs as a moderate or major reason for nonparticipation. It is

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[9] The survey also left space for respondents to write in reasons for nonparticipation of eligible students, and just under one-fifth of respondents did so. Nearly half of the write-in responses fall into one of two categories--"not enough openings" and "students choose to work." Other responses include distance/transportation problems and problems with the program's organization or recruitment.

TABLE II.2

REASONS FOR NONPARTICIPATION IN UPWARD BOUND, BY LOCATION AND GRADE LEVEL

	Location		Grade Level		
Reason	Urban	Rural	Middle	High	All Schools[a]
Not Aware	39%**	21%**	41%	30%	32%
Did Not Apply	79	78	87*	77*	79
Not Accepted	23	24	36	21	23
Declined Acceptance	31	23	24	29	28
Served by Other Programs	22	18	16	22	21
Sample Size[b]	302	183	77	495	572

[a] Percent of respondents who identified as "moderate" or "major" the factor explaining the nonparticipation of eligible students.

[b] Because of missing data, samples size may fluctuate slightly across items in the table.

*Subgroup differences significant at the 10 percent level.
**Subgroup differences significant at the 5 percent level.

possible that some students do not apply because they estimate (correctly in some cases) that their chances of acceptance are low. If Upward Bound served more students in the target schools, or if the program were more heavily promoted, some of these nonapplicants might choose to apply.

In terms of location and grade level, the most noteworthy difference is that urban secondary schools were more than twice as likely as rural secondary schools to cite lack of awareness of Upward Bound as a moderate or major reason for nonparticipation. This may be partly because of the larger size of urban schools or greater publicity about the program in rural areas through word-of-mouth or other means.

Although only one quarter (23 percent) of liaisons reported students' being turned down as a moderate or major reason for nonparticipation, other responses to questions in the target school survey suggest that many schools have a sizable number of applicants who are turned down. Liaisons were asked to estimate the fraction of applicants who are selected for the program. Their responses indicate a wide variation across schools in the rates at which Upward Bound applicants are selected for the program (Table II.3). Summing down the last column, we see that fewer than half the Upward Bound program applicants are selected in about 44 percent of target schools. In these schools, the number of students turned away from Upward Bound is at least as large as the group selected for Upward Bound. On the other hand, in 40 percent of schools, Upward Bound selects over three-fourths of students who apply for the program and therefore turns away fewer than one-quarter of applicants.[10]

Students in middle schools are turned away from Upward Bound at a substantially higher rate than in high schools. Table II.3 shows that fewer than half the applicants are selected in 66 percent of

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[10] While we might expect schools with high demand for Upward Bound to have more applicants than slots, the fact that many schools have a high fraction of their students selected does not mean that the program serves all students who want to participate. For instance, these schools may be prescreening applicants or may be referring about as many applicants to the program as there are openings.

TABLE II.3

PERCENTAGE OF UPWARD BOUND APPLICANTS SELECTED FOR THE PROGRAM, BY GRADE LEVEL

Percentage of Applicants Selected	Grade Level*		All Schools
	Middle	High	
Less than 25%	39	16	20
25% to 50%	27	23	24
51% to 75%	8	18	16
Over 75%	26	43	40
Sample Size	66	484	550

*The difference in distributions across grade levels is significant at the 10 percent level.

middle schools, while the same fraction of applicants is selected in just 39 percent of high schools. In other words, in about two-thirds of middle schools, the number of students being turned away is at least as large as the number of students selected for the program.

C. CONCLUSIONS

Precollege programs such as Upward Bound aim to prepare and motivate students for college. In this chapter we explored the landscape of precollege programs in the target schools. We found that Upward Bound serves only a small fraction of eligible students in most target schools. Some students who are eligible for Upward Bound but not participating in it are enrolled in other precollege programs. However, based on survey responses we estimate that for every student in Upward Bound, there are about 5 students who are eligible but not participating in any precollege program. Hence there must be reasons for nonparticipation besides the availability of other programs. Students' not applying for Upward Bound or being turned down for the program are the most likely reasons for this nonparticipation.

In the next chapter, we shift our focus from the precollege program landscape to Upward Bound and examine the role of the target schools in the Upward Bound program.

III. THE ROLE OF TARGET SCHOOLS IN UPWARD BOUND

Since Upward Bound's inception, policymakers have debated the appropriate role of target schools in the program. According to one school of thought, the target school and its staff should be as fully integrated into the program as possible, sometimes with the explicit goal of improving the target school to reinforce and possibly expand Upward Bound's impacts on students. This interest in full integration is illustrated by the Upward Bound guidelines from almost 25 years ago, which suggested that the "development of significant working relationships among secondary schools, colleges and universities, and the community at large" was critical to effectively motivating and educating Upward Bound participants (1969-70 Federal Guidelines). These guidelines also encouraged projects to work closely with a few high schools and, whenever possible, to use target school staff as Upward Bound instructors and counselors. A second school of thought, which anecdotal evidence suggests became prevalent after the late 1970s, holds that Upward Bound should primarily supplement the in-school experiences of participants. This view attaches much less importance to target school coordination and integration. Proponents of this second school of thought often see the removal of students from an inadequate school environment as an explicit program goal.

The purpose of this chapter is to assess the current role of target schools in Upward Bound by examining (1) the extent to which the schools are involved, or integrated, in the program and (2) whether particular types of Upward Bound projects are especially likely to involve target schools.

A. EXTENT OF TARGET SCHOOL INVOLVEMENT IN UPWARD BOUND

- Nearly all schools reported that their staff help recruit or screen students in some capacity. In almost seven of eight schools, the school counselor is the staff member who has primary responsibility for recruiting and screening activities.

- Few target schools have staff who are involved in a broad range of Upward Bound-related activities including recruiting, collaborative planning, and working as an Upward Bound instructor.

- Nearly two-fifths of the target schools are used as a site for at least one Upward Bound service (such as tutoring or an Upward Bound course).

- Over one-half the target school liaisons reported that the majority of the school staff are familiar with Upward Bound. In a substantial minority of schools, however, staff familiarity with Upward Bound is less prevalent.

The role of target schools in Upward Bound can be defined in terms of the extent to which the schools are involved in the program. Four factors measure school involvement, also referred to as integration: (1) the involvement of target school staff in Upward Bound-related activities, (2) the use of target schools as sites for program services, (3) the interaction between staff from different target schools, and (4) familiarity of target school staff with the program.

1. Involvement of Target School Staff in the Upward Bound Program

Target school staff can be involved with Upward Bound projects in various ways and to varying degrees. For example, they can help recruit or screen students for the program by personally reaching out to or nominating students, writing letters of recommendation, or reviewing student qualifications. In addition, staff can work with the project to help plan academic and nonacademic activities, or they can work as Upward Bound instructors during the summer or academic year programs. To learn about the activities in which target school staff participate, we asked school liaisons to report on the activities that occurred during the three years preceding the survey. Liaisons were asked to report this information for any Upward Bound grantee with which they worked.[1]

Figure III.1 shows that, by far, the most common activities in which target school staff participate are recruiting or screening students. Regardless of grade level, nearly all schools (94 percent) reported that their staff help recruit or screen students in some capacity; the most common activity, as reported by more than seven-tenths of liaisons, is writing letters of recommendation for students. This is followed closely by other activities such as personally recruiting students, nominating candidates, and reviewing student qualifications (see Figure III.1, inset). In almost seven of eight schools, the school counselor is the staff member with primary responsibility for recruiting and screening activities.

Compared with recruiting, target school involvement in other Upward Bound activities appears to be less prevalent and less intensive. For instance, about two-fifths of schools reported at least minimal involvement in helping Upward Bound projects plan academic or nonacademic activities. Only a few schools--about 10 to 15 percent--reported *more* than minimal involvement, which means that only rarely do the target school liaisons perceive close collaboration between the target school and Upward Bound project staff in terms of planning activities.[2] About three-tenths of the target schools said that school staff had visited Upward Bound classes or project offices, and almost one-quarter reported that at least one member of the target school faculty worked as an Upward Bound instructor. Less than one-fifth reported participating in an Upward Bound-sponsored workshop.

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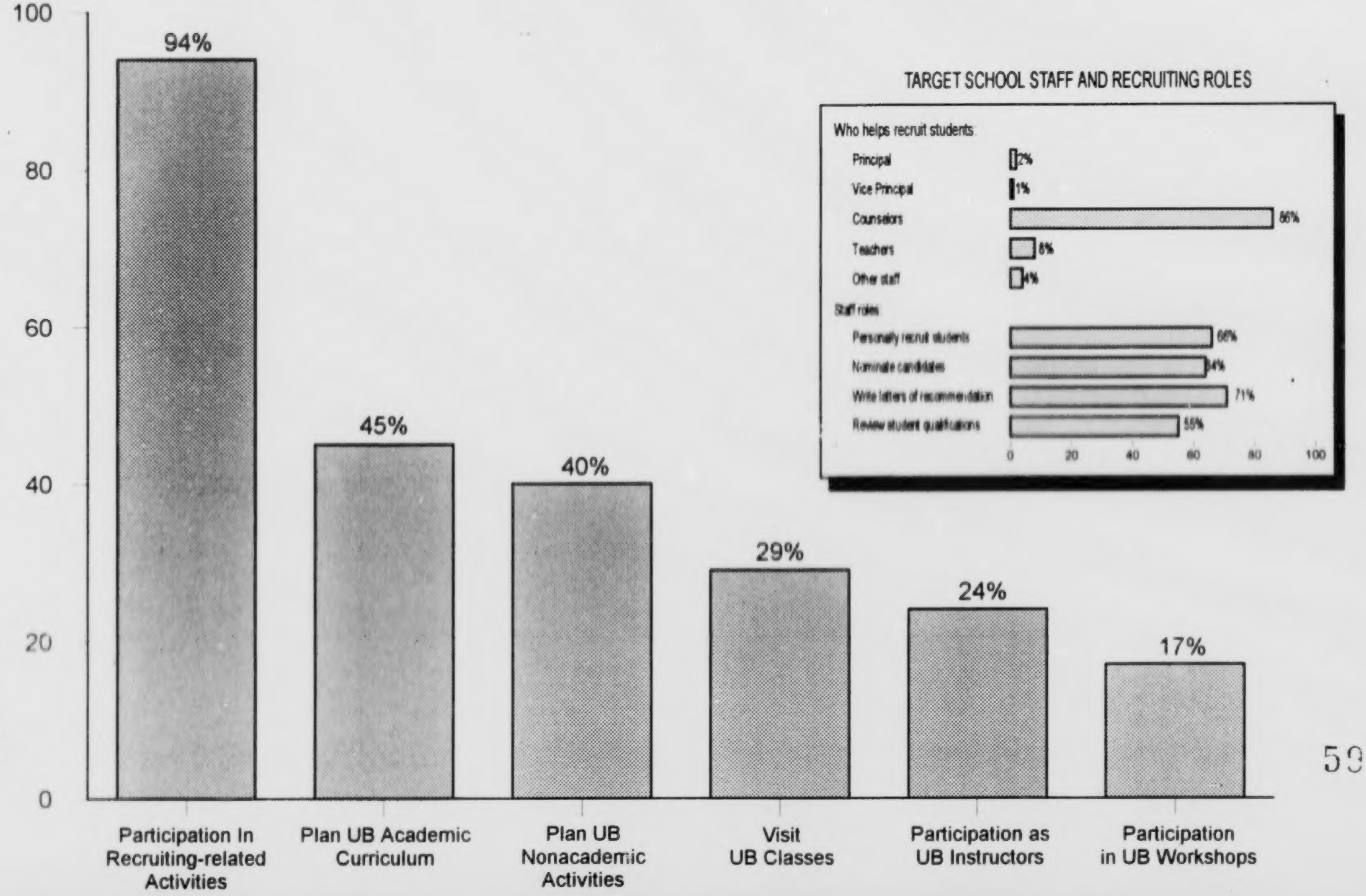
[1] While nearly all schools worked with a single grantee, about 5 percent worked with two or more regular Upward Bound grantees.

[2] A more detailed look at involvement in planning academic curriculum shows that one-third of the liaisons reported minimal involvement, one-tenth reported moderate involvement, and less than one-tenth reported being involved in actual decision-making. Almost three-tenths of the liaisons reported that staff are minimally involved in planning nonacademic activities, and less than one-tenth reported moderate involvement in planning or in actual decision-making.

FIGURE III.1

TARGET SCHOOL STAFF INVOLVEMENT IN UPWARD BOUND



As we expected, staff in middle schools are much less likely than those in high schools to be involved in activities other than recruiting. Over 90 percent of middle school liaisons reported minimal to no involvement of staff in Upward Bound planning activities (see Appendix Table B.1). Middle school staff members' visits to Upward Bound classes, employment as Upward Bound instructors, and assistance with curriculum and services lagged well behind the levels that liaisons reported for staff in target high schools. As noted in Chapter I, although middle schools exhibit lower levels of involvement on these measures, they do not influence the results for all schools since middle schools constitute only a fifth of target schools.

We can also identify the *extent* to which target school staff are integrated into the Upward Bound program by imagining a scale that draws on the activities in Figure III.1. The scale ranges from 1 to 5, reflecting increasing involvement with the Upward Bound project. At the low end of the scale are target schools in which staff are not involved in any activities. Next are target schools in which staff only help to recruit or screen students; these schools would receive a score of 2. They are followed by schools in which staff help with recruiting *and* either participate in Upward Bound workshops or visit Upward Bound classes or project offices; these schools would receive a score of 3. Schools with a score of 4 would participate in the preceding activities and be at least minimally involved in planning academic or nonacademic Upward Bound activities. The most fully integrated schools, given a score of 5, would be involved in all the preceding activities and would have staff working as Upward Bound instructors or tutors. Overall, about 70 percent of target schools fall somewhere along this scale.[3]

Figure III.2 shows that according to this scale most schools are only moderately integrated into the Upward Bound program, and few participate in the whole range of activities. The figure accounts for the progressive involvement in activities reported by 92 percent of target schools. Omitted from Figure III.2

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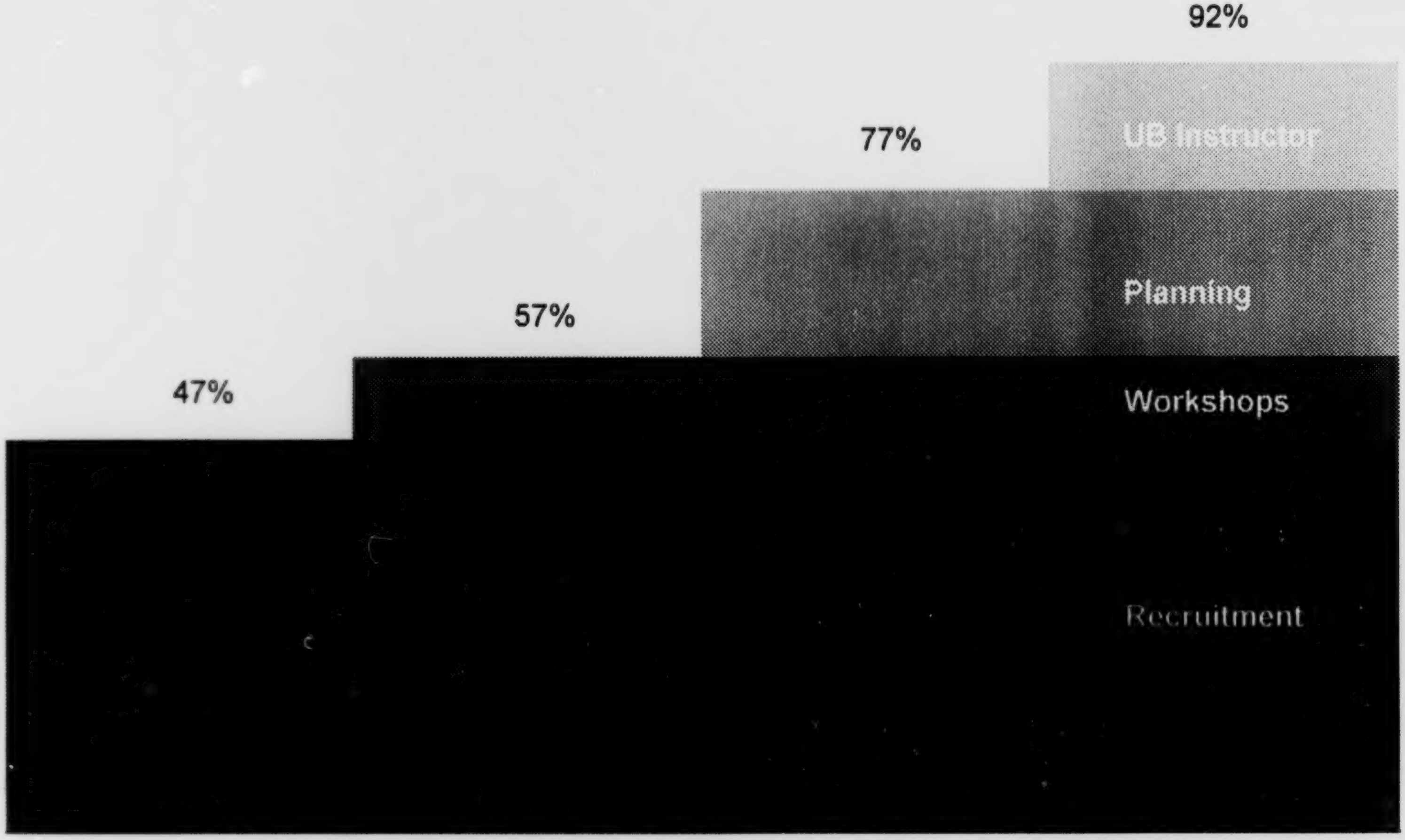
[3] For instance, schools that help to recruit students and have staff working as Upward Bound instructors but do not participate in any of the "in between" activities do not fall along the scale. These schools are excluded from the analysis described in the next paragraph.

FIGURE III.2

SCALED TARGET SCHOOL INVOLVEMENT IN UPWARD BOUND STAFF ACTIVITIES



Note: Activities do not sum to 100% because target schools reporting no activities with Upward Bound are excluded

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are the 8 percent of schools that reported their staff did not participate in any of the listed activities. Just under half of the schools (47 percent) reported involvement only in recruiting. Beyond the basic activity of recruiting, one-tenth of target schools reported that staff also visit Upward Bound project offices or participate in Upward Bound-sponsored workshops. At the next step on the scale, about 20 percent of the schools reported that staff not only participate in each of the activities mentioned above but were also involved in helping Upward Bound staff plan academic or nonacademic activities. Finally, just over one-tenth of the schools (10 percent) reported that target school staff are "fully" integrated into the program as evidenced by their involvement in all of the activities comprising the scale. Once again, while middle schools exhibit less involvement in Upward Bound activities, they do not alter these overall patterns.

2. Target Schools as Upward Bound Sites

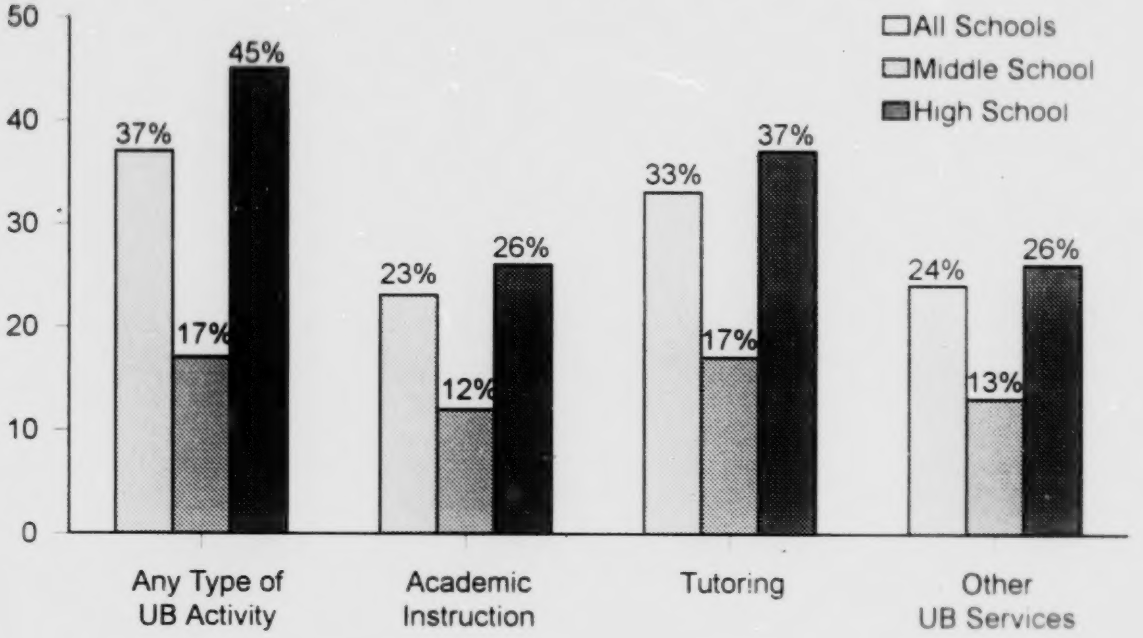
The use of target schools as sites for academic instruction, tutoring, or other services is a second measure of target school involvement in Upward Bound. Liaisons were asked to report on whether the school was used in this way during the most recent year for which students from the school were selected for Upward Bound, and if so, when during the day or week the services were offered.

The upper panel in Figure III.3 shows that more than one-third (38 percent) of the target schools are used a site for at least one type of service. Tutoring is the most common, offered in 33 percent of target schools, while academic instruction or other types of Upward Bound services (23 percent and 24 percent, respectively) are offered in almost one-quarter of the schools. Figure III.3 also demonstrates the large difference between middle schools and high schools serving as sites for Upward Bound activities. Middle schools are much less likely to report Upward Bound activities at their facilities.

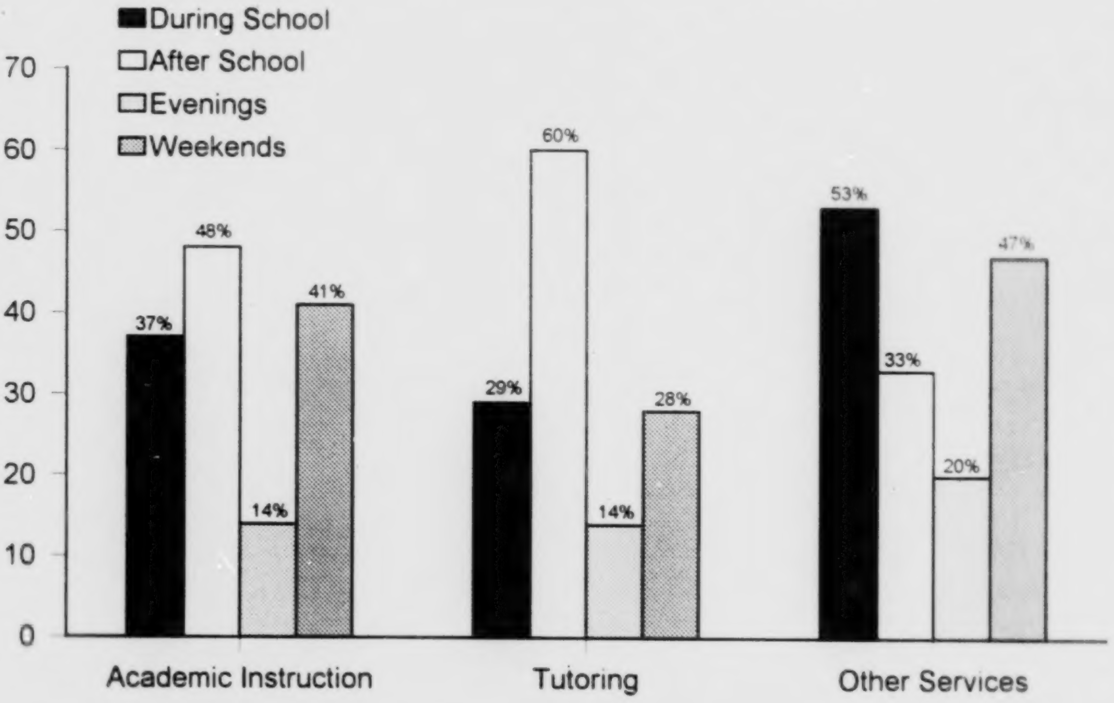
The lower panel in Figure III.3 shows that when Upward Bound academic instruction and tutoring are offered at the target schools, they are typically offered after school. Academic instruction is offered

FIGURE III.3

TARGET SCHOOL INTEGRATION INTO THE UPWARD BOUND PROGRAM: USE OF SCHOOL FACILITIES



SCHEDULE OF ACTIVITIES: ALL SCHOOLS



after school in almost half the schools that provide this service, and during the school day and on weekends in about 40 percent of these schools.[4] Tutoring sessions are held after school in 60 percent of the schools that offer this service and during regular school hours and on weekends in about 30 percent of these schools. More than half the schools used as a site for other services or courses offer them during school hours, while almost half offer them on the weekends. Perhaps in part because of transportation and safety issues, target schools are much less frequently used during the evenings as a site for instruction, tutoring, or other services.

3. Interaction Between Staff from Different Target Schools

The extent to which staff from different schools interact is a third measure of target school involvement in the program. We assessed the incidence of faculty interaction on the basis of liaisons' responses to a question about whether staff from their target school participated with staff from other target schools in Upward Bound activities such as recruitment, workshops, or field trips during the most recent year. Although the median target school is about 1 of 12 schools working with an Upward Bound project (Chapter II), three-quarters of the schools reported no interaction with faculty from other target schools.

4. Familiarity of Target School Staff with the Upward Bound Program

Although there appears to be only limited contact between schools and projects, staff in many schools appear to be highly familiar with the Upward Bound program. Nearly one-third of the liaisons (31 percent) reported that 75 to 100 percent of the faculty are familiar Upward Bound, while about one-quarter (26 percent) reported that 50 to 75 percent of the faculty are familiar with the program (see Table III.1). By contrast, many target schools report that familiarity with the program is much less widespread: more than one-quarter of the schools (28 percent) indicated that less than one-fourth of the faculty are familiar with the program.

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[4] These percentages do not sum to 100 percent because schools can offer activities at several times.

TABLE III.1

TARGET SCHOOL FAMILIARITY AND INVOLVEMENT WITH UPWARD BOUND

Percent of Faculty Familiar with Upward Bound	All Schools	Staff Involvement in Upward Bound Activities					School as a UB Site		Interact with Other Target Schools	
		1	2	3	4	5	No	Yes	No	Yes
0 - 25	28%	71%	33%	18%	15%	8%	30%	21%	31%	11%
25 - 50	16	6	11	36	13	7	12	13	12	14
51 - 75	26	18	31	19	43	43	33	34	33	32
75+	31	5	26	27	29	41	25	32	23	43
Correlation[a]		.35*					.16*		.37*	

Note: Staff involvement in Upward Bound activities reflects the following scale: 1 = no activities, 2 = recruiting only, 3 = recruiting and workshops, 4 = recruiting, workshops, and planning, 5 = recruiting, workshops, planning, and serving as Upward Bound instructors.

[a] Correlation is based on the gamma coefficient.

*Statistically significant at the .05 level under the assumption of simple random sampling.

Table III.1 also shows the relationship between staff familiarity with Upward Bound and each of the three measures of target school involvement--staff involvement as measured on the five-point activities scale described earlier in this chapter, use of target schools as sites for Upward Bound services, and interaction between target school staff. As shown in the last row of the table, there is a positive correlation between familiarity and each measure. This means that target schools that are more involved in the Upward Bound program are also more familiar with the program--a finding that should not be surprising. Because the three indicators of target school involvement may be correlated with one another, the results in Table III.1 do not tell us *which* of the measures of involvement is most important in explaining the relationship between school involvement and staff familiarity.[5] However, if the three indicators of involvement are treated in an analytic model as predictors of familiarity, an examination of the independent effects of each shows that only greater staff involvement has an independent effect on familiarity (estimates not shown--see Appendix Table C.1).

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[5] In fact, we examined the correlation among the three measures of involvement and found a strong positive association between the measures (analysis not included). This means, for example, that schools where staff are involved in the program are also more likely to be used for providing Upward Bound services than are schools with low staff involvement.

B. SCHOOL AND PROJECT CHARACTERISTICS AFFECTING TARGET SCHOOL INTEGRATION AND FAMILIARITY WITH THE PROGRAM

- Target schools with more Upward Bound participants tend to be more fully integrated in the program than those with fewer participants. Further, staff in these schools tend to be more familiar with the program.
- Target schools working with Upward Bound projects located at two-year colleges are more likely to be integrated into Upward Bound than schools working with projects at four-year colleges and universities.
- Middle schools do not tend to be as fully integrated into Upward Bound as high schools.
- Staff in target schools that have a long working relationship with Upward Bound tend to be more familiar with the program. Target schools hosted by residential programs tend to report less familiarity.

The purpose of this section is to assess whether certain school and project characteristics are associated with higher levels of target school involvement and familiarity with the Upward Bound program. We explored whether these characteristics affected the measures of target school involvement and familiarity analyzed in Section A: (1) the five-point scale of staff involvement in Upward Bound, (2) the use of target school facilities by Upward Bound projects, (3) interaction with staff from other target schools, and (4) staff familiarity with Upward Bound. For this analysis, we estimated a series of analytic models through which the independent effect of each of characteristic could be assessed. The characteristics we examined include:

- Grade level (middle school or high school)
- School location (rural/urban)
- Number of years as an Upward Bound target school
- Enrollment
- Number of Upward Bound participants enrolled in the target school

- Type of host institution (two- or four-year post-secondary institution)
- Academic emphasis of the Upward Bound project (math/science or other)
- Presence of a summer residential or nonresidential program

Table III.2 shows the relationship between project and target school characteristics, and the measures of school involvement and familiarity. A plus sign denotes positive effects, and a minus sign denotes negative effects.[6]

The results of the analysis show that only a single variable--number of Upward Bound participants enrolled in a target school--is consistently associated with school involvement. Staff in target schools with many Upward Bound participants are more likely to be involved in Upward Bound activities. These target schools are also more likely to be used as a site for Upward Bound services, to interact with staff from other target schools, and to know about the program. In part, this finding may indicate that when a project selects clusters of students from just a few schools, it becomes easier for projects to work more closely with the schools and engage the staff in a variety of activities. Projects wishing to actively involve target schools would then be more likely to choose to work with a small number of schools.

Our analysis also shows that target schools connected with projects located at two-year colleges are more fully integrated into Upward Bound than those connected with projects at four-year colleges. One possible reason for this difference may be that four-year institutions have greater resources--such as facilities, staff, and transportation--and hence, do not need to use target school staff or facilities to the extent that two-year institutions do.[7] Another possible explanation is that four-year schools face greater pressures to keep their staff busy (and hence not rely on target school staff), particularly during the summer, while two-year schools may not face the same pressures. We also found that staff in target

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[6] Numerical estimates of the effects are shown in Appendix Table C.2.

[7] Further analysis shows that four-year schools use target school staff mainly for recruiting-related activities, rarely using the school facilities for providing Upward Bound services (results not included).

TABLE III.2

FACTORS AFFECTING TARGET SCHOOL INVOLVEMENT AND FAMILIARITY WITH UPWARD BOUND

School and Project Characteristics Affecting Target Schol Involvement and Familiarity	Indicators of Target School Involvement and Familiarity			
	Target School Staff Involvement	Use of Target School as a UB Site	Interaction Among Faculty in Different Target Schools	Target School Familiarity with UB Program
Target School Characteristics				
Middle School		–	–	
Rural Location				
Years as a Target School	+			+
Total Enrollment			–	–
Number of UB Participants	+	+	+	+
Project Characteristics				
4-Year Host Institution	–	–	–	
Math/Science Emphasis		–		
Residential Program				–

schools associated with projects hosted by four-year colleges are less likely to interact with staff in other target schools than those associated with projects located at two-year colleges.

Table III.2 also shows the following:

- Middle schools are less likely than high schools to be used as a site for Upward Bound services, and faculty in these schools are less likely than staff at high schools to interact with staff from other target schools. These findings may reflect the fact that many projects recruit students just before they graduate from middle schools, and because these students attend high school while in Upward Bound, there is no need to deliver services to their former schools.

- Staff in schools that have been target schools for many years tend to be more fully integrated into Upward Bound than are staff in schools with only a few years as an Upward Bound target school. Furthermore, staff in long-time target schools are more familiar with the program.

- Staff in target schools working with projects that have a residential component tend to be less familiar with the program than those working with projects that do not have a residential component.

- Finally, projects with a strong math/science emphasis are less likely then other projects to use target school facilities. This may suggest that the demand for lab or computer facilities in these projects may not be readily met by the target schools.

C. CONCLUSIONS

Early federal guidelines encouraged Upward Bound projects to integrate target schools into their programs by working closely with schools and using school staff as Upward Bound instructors and counselors. This chapter explored the extent to which schools are integrated into the Upward Bound program along several dimensions, including the involvement of target school staff in Upward Bound-related activities, the use of target schools as a site for program services, and the interaction between staff from different target schools. Overall, we found target school integration with the program to be quite limited. Target schools' most consistent role in Upward Bound is in helping to recruit and screen students for the program. Staff in over two-fifths of schools are involved in planning Upward Bound activities (but most are only minimally involved) and nearly two-fifths of schools are used as a site for Upward Bound activities. However, few target schools have staff who are involved in a broad range of Upward Bound-related activities, including recruiting, collaborative planning, and working as an Upward Bound instructor, suggesting that the goal of the early federal guidelines has not been fully achieved in most schools.

This chapter did not address the question of whether more integration is likely to lead to better outcomes for students. That question will be addressed in a future report from the student effectiveness component of the evaluation. However, in the next chapter we begin to explore issues of Upward Bound's effectiveness by considering the target schools' perceptions of the program.

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IV. TARGET SCHOOL PERCEPTIONS OF THE EFFECTS OF UPWARD BOUND

Upward Bound target schools are in a unique position to assess Upward Bound, since they are the source of Upward Bound participants and can observe the program's effects, not only on participating students, but on the entire target school. In this chapter we investigate how target schools perceive Upward Bound. Using responses provided by the designated Upward Bound liaison in each target school, we consider what effect Upward Bound has on participants' behavior, and whether there are "spillover effects" from the program on the target school as a whole. We also identify policies that, in the opinion of target school liaisons, would improve Upward Bound.

The chapter has four sections. In the first section we examine the general perceptions of Upward Bound by target school faculty familiar with the program. The second section presents impressions from Upward Bound liaisons of the extent to which Upward Bound has affected attitudes and policies in the target schools. In the third section we consider the reported effects of Upward Bound on students participating in the program. The fourth section reviews ways in which, in the opinion of target school liaisons, Upward Bound can be improved.

A. TARGET SCHOOLS' OVERALL PERCEPTIONS OF UPWARD BOUND

- Over four-fifths of target schools report that faculty familiar with Upward Bound have a "very favorable" or "somewhat favorable" impression of the program.
- The fraction of target schools reporting very favorable faculty impressions of Upward Bound is higher when a majority of the faculty is familiar with the program than when a only a minority of the faculty is familiar with Upward Bound.

In this section we consider the impressions of Upward Bound among target school faculty who are familiar with the Upward Bound program, as reported by the target school liaisons. We first look at the general impressions of Upward Bound in target schools. We then investigate whether impressions of

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Upward Bound vary when a majority of the target school faculty is familiar with the Upward Bound program and when a larger share of the student body is in the program.

1. Attitudes Toward Upward Bound Among Target School Faculty

A substantial majority of target schools reports that faculty members have a generally favorable impression of Upward Bound. Three-fifths of target school liaisons report that faculty who are familiar with the program have a "very favorable" impression of Upward Bound; over one-fifth (23 percent) report that these faculty have a "somewhat favorable" impression of the program (Figure IV.1). Most of the remaining target schools report that faculty have a neutral attitude towards Upward Bound. Only about one out of every twenty-five target schools reports that the attitude of faculty members toward Upward Bound is unfavorable.

2. Faculty Attitudes Toward Upward Bound when Faculty and Student Familiarity Varies

Faculty impressions of Upward Bound tend to be more favorable when a majority of the faculty is familiar with the program. As was reported in Chapter III, there is considerable variability in the familiarity of target school staff with the Upward Bound. In nearly three-fifths (57 percent) of target schools, over half of the faculty are familiar with Upward Bound. Of these target schools, 70 percent report that faculty have a "very favorable" impression of Upward Bound, compared with only 46 percent of target schools where less than half of the faculty is familiar with the program. Target schools where a majority of the faculty is familiar with Upward Bound are only about half as likely as other target schools to report that faculty members have an unfavorable impression of Upward Bound (12 percent versus 23 percent). One explanation for this relationship is that target school staff are more likely to publicize Upward Bound among their peers if they have a very favorable impression of the program.

Faculty attitudes toward Upward Bound are also more favorable when a larger share of target school students participates in Upward Bound. Almost half (45 percent) of target schools have over 1 percent

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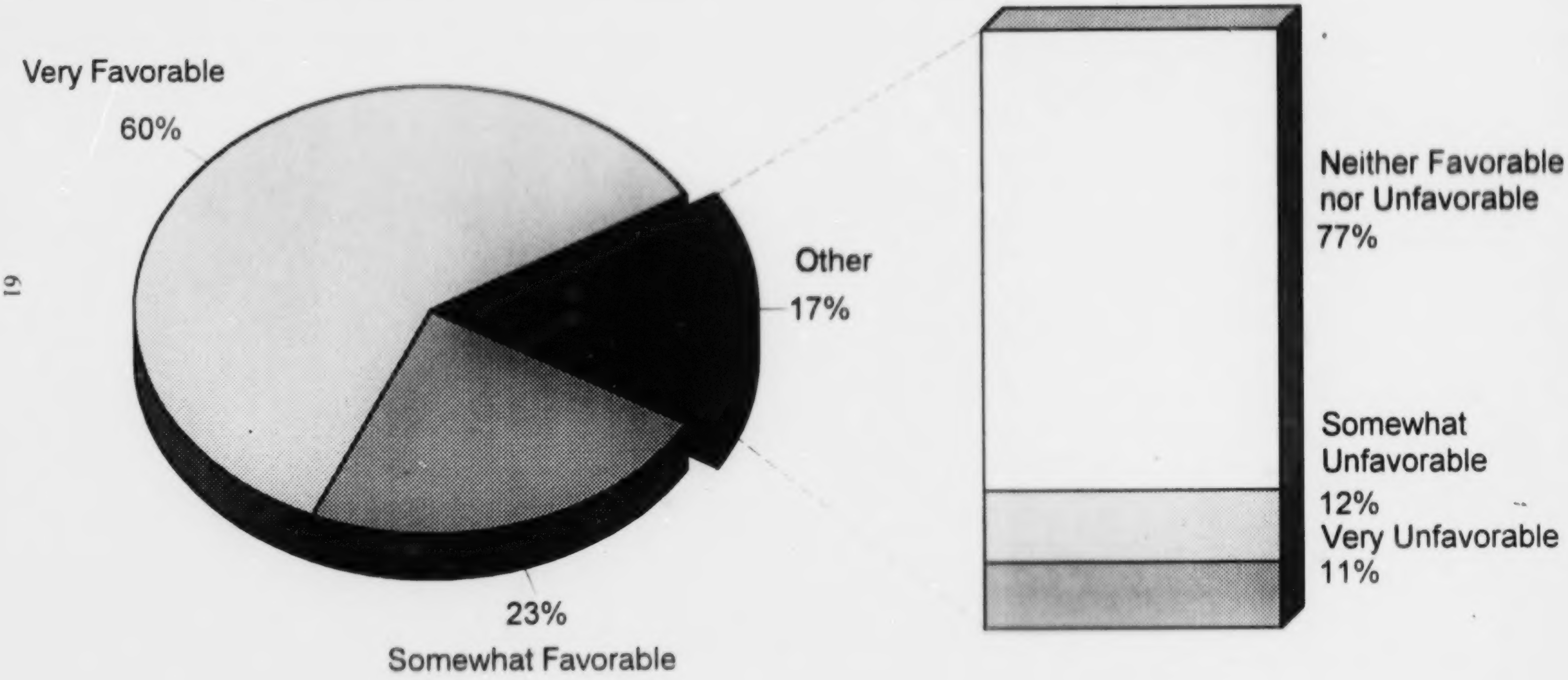
FIGURE IV.1

FACULTY ATTITUDES TOWARD UPWARD BOUND

General Attitude Among Faculty Familiar with the Program, by Target School



of their students participating in Upward Bound. Of these schools, 71 percent report that faculty have a "very favorable" impression of Upward Bound, compared with only 54 percent of target schools where no more than 1 percent of students are participating in Upward Bound. It is likely that when more faculty have a positive view of Upward Bound, they would be more inclined to encourage their students to apply to the Upward Bound program, and consequently a larger share of students would become Upward Bound participants. In fact, a student from a target school with a generally positive view of Upward Bound is almost twice as likely to be an Upward Bound participant as a student from a target school with a negative or neutral view of Upward Bound.[1] Another explanation for this relationship is that negative faculty attitudes toward Upward Bound might arise when Upward Bound is unable or unwilling to select more of a target school's students as participants.

B. PERCEPTIONS OF UPWARD BOUND'S EFFECTS ON THE TARGET SCHOOL

- The reported spillover effects of Upward Bound on the target school are usually minor.
- Upward Bound is more likely to have reported effects on the attitudes and actions of parents and teachers than on the actual educational policies adopted by target school administrators.
- The share of target schools reporting effects of Upward Bound on the school is about twice as high for target schools in which the staff interact with Upward Bound projects in areas besides recruiting than for target schools without such interaction.
- The share of target schools reporting effects of Upward Bound on the school is noticeably higher for schools in which over one percent of the students participates in Upward Bound.

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[1] For target schools with generally positive impressions of Upward Bound, 2.4 percent of students are Upward Bound, compared with 1.3 percent of students in target schools with neutral or negative impressions of Upward Bound.

Upward Bound, by involving some target school students and faculty in the Upward Bound program, has the potential to influence the target school as a whole as well as the students and faculty members who are directly involved in the program. Such an influence, extending even to target school students not participating in Upward Bound, is envisaged by the following statement from the 1969-70 Upward Bound guidelines:

> It is important that colleges with Upward Bound programs work closely with the secondary schools from which the students come... *Having a sizeable cluster of students returning to a single school is very important* [emphasis in original]. Both in the summer and in the academic year a cluster of students should gain a common core of experience to share with one another and with their school classmates. Wherever possible, secondary school staff from the schools from which the Upward Bound students are coming should be used in a teaching, tutorial, or counseling capacity.

In this section we investigate these "spillover effects" of Upward Bound on the target school. First we consider the manner and extent to which Upward Bound influences target schools. Next we inquire whether Upward Bound affects certain types of target schools more than others.

1. The Influence of Upward Bound on Target Schools

Only a small fraction of target schools reports anything more than minor influences from their participation in the Upward Bound program. Reported influences from Upward Bound are more likely to be on the attitudes and actions of parents or teachers rather than on the educational policies adopted by target school administrators.

The survey of Upward Bound target schools asked target school liaisons to indicate the extent to which participating in Upward Bound has influenced the school's curriculum, instructional strategies, staff development, staff expectations of students, parental involvement, and school restructuring or reform. Liaisons could indicate whether Upward Bound had no influence, a minor influence, a moderate influence, or a major influence in each of these areas. On the whole, only a small fraction of target schools report being influenced by Upward Bound in anything more than a minor sense. While three-tenths of target schools report moderate or major influences on parental involvement, and one-quarter report moderate or major influences on staff expectations of students, no more than one-tenth of schools report similar influences in each of the other four areas described above.

Upward Bound is more likely to have spillover effects on parental behavior or faculty attitudes than on target school policies. About three-fifths (58 percent) of target schools report that parental involvement has been influenced by Upward Bound in at least a minor sense (Figure IV.2). About half (54 percent) of target school liaisons indicate that staff expectations of students are affected by the school's participation in the Upward Bound program. Both of these effects are presumably positive.[2] Fewer target schools report that Upward Bound has influenced their actual policies. For each of four policy areas--instructional strategies, curriculum, staff development, and school restructuring or reform--only one-third of target schools report at least some influences from participating in the Upward Bound program.

2. Reported Effects of Upward Bound for Target Schools with Particular Characteristics

We might expect the existence of spillover effects of Upward Bound to vary according to target school characteristics. For example, when target school staff members are more involved in Upward Bound, the target school as a whole may be more likely to be more affected by the Upward Bound program. Similarly, when a larger share of students is participating in Upward Bound, we might expect target schools to be more likely to report spillover effects. We estimated a set of analytic models to see whether different types of target schools were more likely to report spillover effects, other things being held equal.

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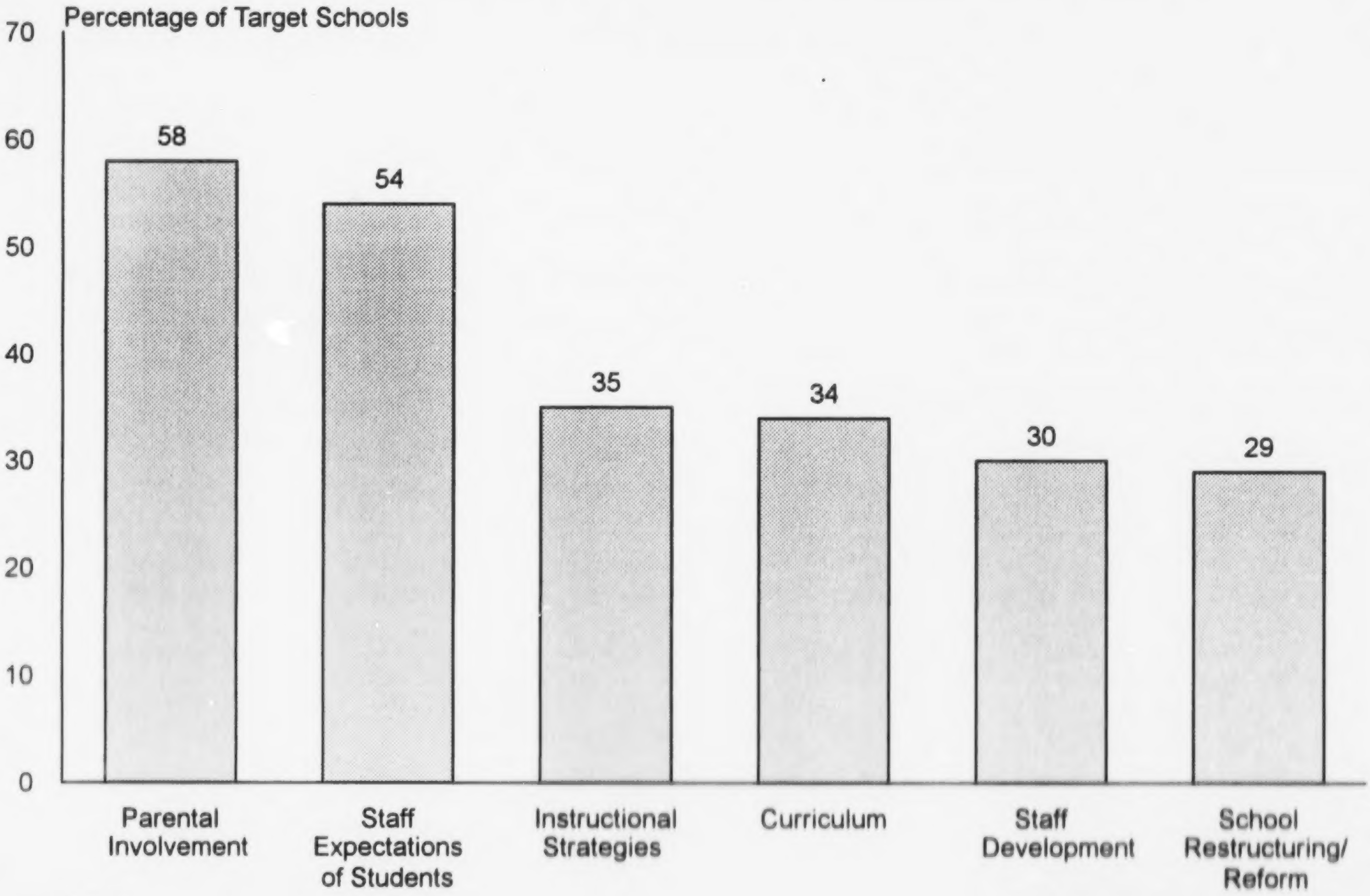
[2] It is not possible from the survey to ascertain whether target schools experienced any negative effects on parental involvement or staff expectations of students. If Upward Bound encourages parents to get more involved in the overall education of their children, then parental involvement in the target school could increase. It is possible, however, that Upward Bound provides opportunities for parental involvement in the project itself, and therefore diminishes parental involvement in the target school. The effect of Upward Bound on staff expectations of students is also of uncertain direction.

FIGURE IV.2

INFLUENCE OF UPWARD BOUND ON TARGET SCHOOLS

Percentage of Target Schools Reporting Effects on School



To identify target schools according to the degree to which target school staff members interact with Upward Bound, we distinguished target school integration into Upward Bound across three dimensions. The first dimension is the participation of target school staff in the Upward Bound recruiting and screening activities such as recruiting students, nominating students, writing letters of recommendation, and reviewing student qualifications. The second dimension is the participation of target school staff in other activities involving Upward Bound projects, such as workshops, visits to Upward Bound classes or project offices, or serving as Upward Bound instructors or tutors. The third dimension involves staff interaction with the staff of other Upward Bound target schools in activities such as recruitment, workshops, and field trips. These last two dimensions of target school interaction with Upward Bound are most consistently associated with higher rates of perceived spillover effects. Other school characteristics we examined include the use of the target school as a site for Upward Bound services, the participation of over one percent of the students in Upward Bound, and the eligibility of a majority of students for free lunches.[3]

The share of Upward Bound target schools reporting effects from Upward Bound is dramatically larger when target school staff interact with Upward Bound projects in areas other than recruiting. For target schools reporting such interactions, over seven-tenths report effects on parental involvement and staff expectations, compared with under half of other target schools (Figure IV.3). About two-fifths of target schools where staff members participate in Upward Bound activities besides recruiting report effects on instructional approaches, curriculum, staff development, and school reform, compared with only one-fifth of target schools without such participation. After holding constant other target school

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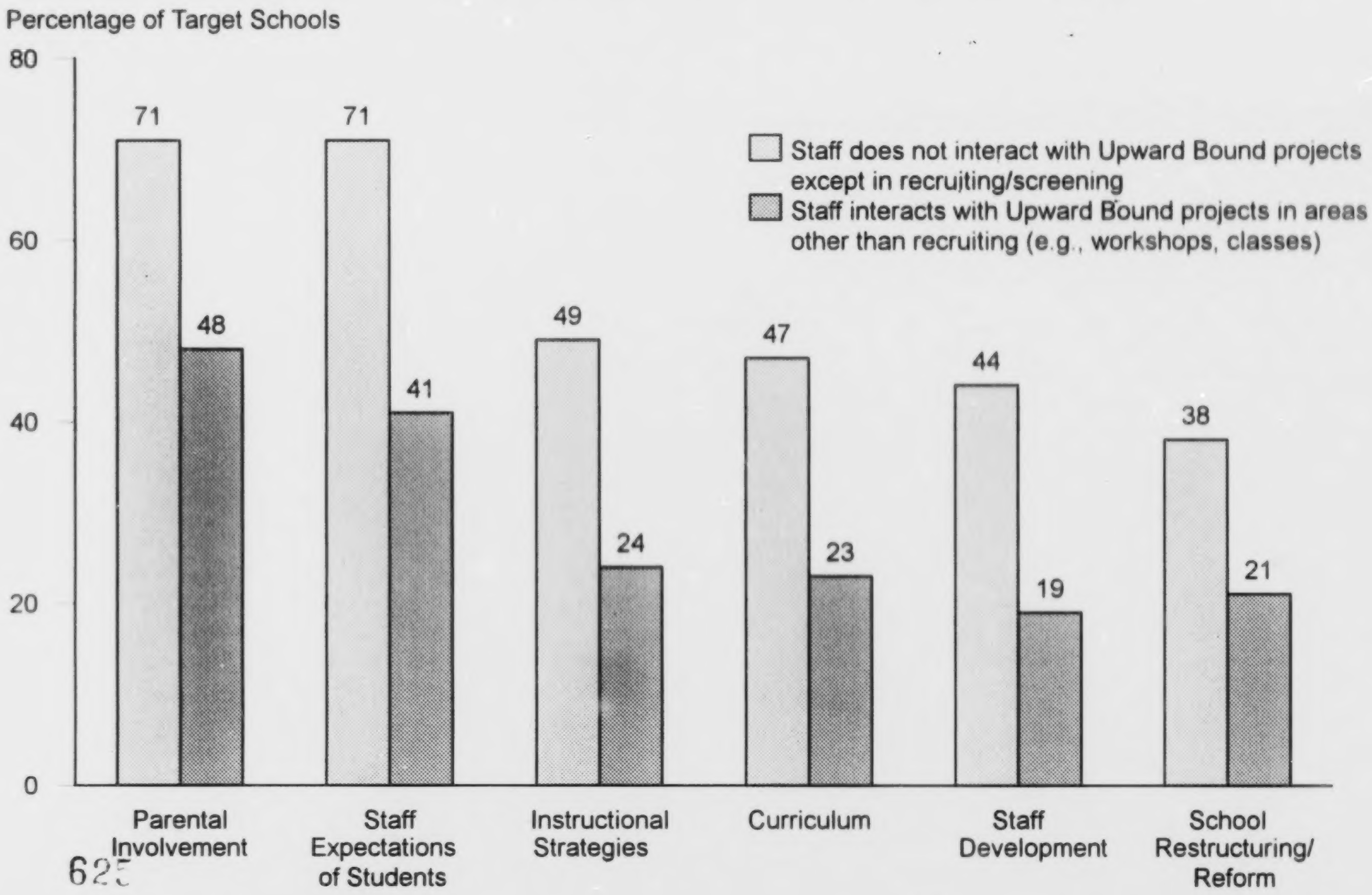
[3] The full list of school characteristics controlled for included: the three types of staff interaction with Upward Bound described above; the use of the school as a site for Upward Bound services; over 10 years as a target school; over one percent of students in Upward Bound; over one percent of students in other programs; at least half of students eligible for free lunches; the presence of grade 10 or higher; school size; and location in a metropolitan area. The analyses also included the following characteristics of the corresponding project in the effectiveness study: host institution type; presence of a math/science focus to course requirements; absence of a residential nonbridge summer program; and predominant ethnicity different from the predominant ethnicity of the target school. We used multivariate logit analyses to estimate the individual effects of these characteristics.

FIGURE IV.3

REPORTED EFFECTS OF UPWARD BOUND ON TARGET SCHOOLS

According to Target School Staff Interaction with Upward Bound Projects



characteristics, target schools interacting with Upward Bound projects in areas other than recruiting are significantly more likely to report spillover effects in all of the areas described above except school restructuring and reform. These strong relationships suggest that interaction between the staff of different target schools has the potential to stimulate changes in school attitudes and policies, or at least reflects schools' openness to making such changes.

Staff interaction with the staff of other target schools is also associated with differences in reported spillover effects. For target schools in which staff members interact with other target schools' staff in areas such as Upward Bound workshops and recruiting, 58 percent report effects on the target school's instructional methods, and 55 percent report effects on the school's curriculum. These proportions are twice as large as the corresponding percentages for schools not interacting with other Upward Bound target schools, and these differences persist after other target school characteristics are held constant.

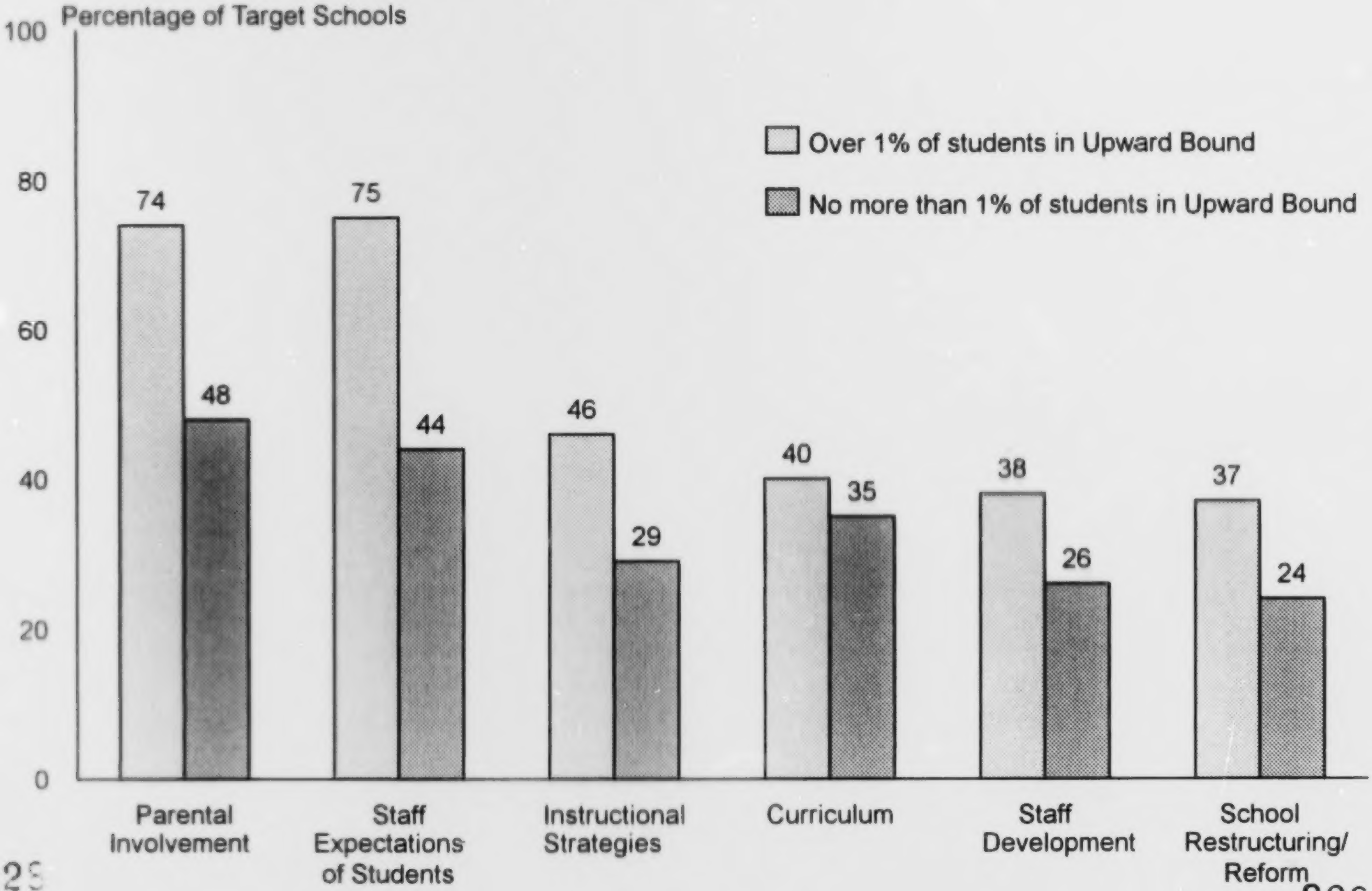
The use of the target school as a site for Upward Bound services is also associated with noticeable differences in rates of reported spillover effects. Half of target schools serving as Upward Bound sites report spillover effects on instructional methods, compared with only a quarter (23 percent) of target schools not serving as Upward Bound sites. Two-fifths (39 percent) of target schools serving as Upward Bound sites report effects on school restructuring and reform, compared with only one-fifth (22 percent) of schools not serving as Upward Bound sites. Target schools serving as Upward Bound sites are also more likely to report spillover effects on parental involvement and staff expectations of students, even after controlling for other target school characteristics.

Target schools are also more likely to report being influenced by Upward Bound when a larger proportion of the target school's students participates in Upward Bound (Figure IV.4). For the nearly half of target schools with over one percent of their students in Upward Bound, three-quarters (74 percent) report that Upward Bound has influenced parental involvement, compared with only half (48 percent) of

FIGURE IV.4

REPORTED EFFECTS OF UPWARD BOUND ON TARGET SCHOOLS

By Percentage of Students Participating in Upward Bound



the target schools with no more than one percent of their students in Upward Bound. Three-quarters of target schools with over one percent of their students in Upward Bound also report that Upward Bound has influenced staff expectations of students, compared with only 44 percent of target schools with no more than one percent of their students in Upward Bound. These differences between target schools persist, even after controlling for the target school characteristics described above. A likely explanation for the relationship between the share of students participating in Upward Bound and the reported influence of Upward Bound on the target school is that, when more students participate in Upward Bound, the benefits of the program are more likely to permeate the target school.

Finally, target schools with a majority of low-income students are more likely to report spillover effects from Upward Bound than other target schools. Three-tenths of target schools have a majority of students eligible for free lunch programs. These schools report higher rates of spillover effects on staff expectations of students, instructional strategies, curriculum, staff development, and school restructuring and reform, even after controlling for other school characteristics. A reasonable explanation for this finding is that a target school serving a poorer population of students is more likely to alter its policies and staff attitudes based on interactions with Upward Bound, regardless of whether a large share of the school's students is participating in Upward Bound, because the school is interested in structuring its programs to improve the college prospects of disadvantaged youth.

C. PERCEPTIONS OF UPWARD BOUND'S EFFECTS ON PARTICIPANTS

- Almost all target schools report that Upward Bound has positive effects on participants' grades, homework completion, classroom participation, and class attendance patterns.
- Almost all target schools report that Upward Bound has positive effects on participants' likelihood of taking college preparatory classes.
- Almost all target schools report that Upward Bound has positive effects on participants' interaction with teachers, counselors, and peers.

While the ultimate goals of Upward Bound--increased college attendance and completion--are not addressed directly by the target school survey, target school liaisons were asked questions about a wide range of intermediate outcomes for Upward Bound participants. In this section we investigate the reported effects of Upward Bound in three areas: participants' academic performance, their course-taking and extracurricular activities, and their interaction with target school staff and peers. Readers should bear in mind that these are only perceptions of those reporting and they may or may not be borne out by outcomes data obtained on individual students. Furthermore, these perceptions of liaisons are general assessments of Upward Bound students across the students' years in high school.

1. Perceived Effects of Upward Bound on Participants' Academic Performance

Almost all target schools report that Upward Bound has positive effects on the academic performance of the average Upward Bound participant. At least nine-tenths of target schools report effects on participants in each of four areas: grades on report cards, completion of homework, participation in classroom discussion, and class attendance (Table IV.1). Four-fifths of schools (81 percent) report that all four of these outcomes are positively affected by students' participation in Upward Bound.

There is little difference across different types of target schools in the share of liaisons reporting positive effects on Upward Bound participants' academic performance. While a multivariate analysis similar to the one performed in Section B revealed that certain target school characteristics were associated with differences in reported effects on participants, most of these differences were small (i.e., under 10 percentage points), and none was associated with meaningful differences in more than one measure of academic performance.

TABLE IV.1

REPORTED EFFECTS OF UPWARD BOUND ON PARTICIPANTS, BY TARGET SCHOOL

Area in Which Some Positive Effect is Reported	Percentage of Target Schools
ACADEMIC PERFORMANCE	
Grades on report cards	94 %
Completion of homework assignments	93
Participation in classroom discussion	91
Class attendance	90
PARTICIPATION IN CLASSES AND ACTIVITIES	
Taking college preparatory classes	91
Participation in extracurricular activities other than sports	65
Taking Advanced Placement classes or exams	56
Participation in sports	41
INTERACTION WITH STAFF AND PEERS	
Seeking help from teachers or school staff	91
Attention from teachers or guidance counselors	86
Seeking and receiving peer support	79
Participation in leadership roles	77

2. Perceived Effects of Upward Bound on Students' Course-Taking and Activities

A majority of target schools reports that Upward Bound has positive effects on students' participation in both college-oriented courses and extracurricular activities. Nine-tenths of target schools report that the average Upward Bound participant is more likely to take college preparatory classes (Table IV.1). About two-thirds of target schools (65 percent) report that the average Upward Bound participant is more likely to participate in extracurricular activities other than sports.

Target schools with fewer than 500 students are less likely to report positive effects on participation in sports than other target schools (29 percent versus 44 percent), and they are also less likely to report effects on participation in other extracurricular activities (51 percent versus 69 percent). These differences persist even after holding other project characteristics constant, and probably reflect the more limited extracurricular opportunities available in many smaller target schools. No other target school characteristic studied was associated with meaningful differences in more than one measure of effect on course-taking or extracurricular activities.

3. Perceived Effects of Upward Bound on Students' Interaction with Staff and Peers

Besides reporting effects of Upward Bound on participants' academic performance and school-related activities, most target schools report positive effects of Upward Bound on the average participant's interaction with school staff and peers. Nine-tenths (91 percent) of target schools report a positive effect on Upward Bound participants' likelihood of seeking help from teachers, and almost as many (86 percent) report a positive effect on participants' likelihood of receiving attention from teachers and guidance counselors (Table IV.1). Over three-quarters (79 percent) of target schools report a positive effect on participants' likelihood of seeking and receiving support from their peers, and a similar share (77 percent) indicates a positive effect on participants' participation in leadership roles.

As with other reported effects of Upward Bound on participants, effects on students' interaction with target school staff and with peers appear to be very similar across different types of Upward Bound target schools. No single target school characteristic studied was associated with meaningful differences in more than one measure of interaction with target school staff or peers.

D. PERCEPTIONS OF WAYS IN WHICH UPWARD BOUND CAN BE IMPROVED

- Almost all target school liaisons believe that Upward Bound would be improved if there were more parental involvement in the program.
- Almost all target school liaisons believe that Upward Bound would be improved if the program were expanded to serve more eligible students.
- About half of target school liaisons believe Upward Bound would be harmed if eligibility standards for the program were tightened to focus on students with the greatest need.

In this section we investigate whether the target school liaisons believe that particular changes in the Upward Bound program would be beneficial for the students participating in Upward Bound from their schools. We first consider the potential effect of changes in the relationship between Upward Bound projects, target schools, and the families of participating students. Then we consider the potential effect of changes in the recruitment and admissions policies of Upward Bound projects.

1. Changes in the Relationship Between Projects, Target Schools, and Families

Almost all target school liaisons (94 percent) believe that their students who participate in Upward Bound would benefit if parents were encouraged to participate more in the Upward Bound program (Table IV.2). Involving more faculty from the target school in Upward Bound was also a frequently endorsed change in policy, with over four-fifths (85 percent) of target school liaisons indicating that this measure would help participating students.

Large majorities of target school liaisons believe that benefits would arise from the increased use of the target school and the associated college campus as sites for Upward Bound services. Over three-fourths (79 percent) of target school liaisons believe that increased use of the college campus would have

TABLE IV.2

REPORTED WAYS IN WHICH UPWARD BOUND CAN BE IMPROVED, BY TARGET SCHOOL

Change from Which Some Positive Effect Might Arise	Percentage of Target Schools
CHANGES IN RELATIONSHIP WITH HOME AND SCHOOL	
Encouraging parents to participate more	94%
Involving more faculty from the target school in the program	85
Increased use of the college campus as a site for Upward Bound services	79
Increased use of the target school as a site for Upward Bound services	71
CHANGES IN RECRUITMENT AND ADMISSIONS POLICIES	
Increasing the number of students served by Upward Bound	92
Making more students aware of the program	89
Giving students larger stipends to reduce their need for summer/after-school jobs	77
Recruiting students from lower grades	77
Broadening eligibility requirements so more students are eligible	73
Tightening eligibility requirements to concentrate on students with greatest needs	22

positive effects for participating students, and seven-tenths (71 percent) of target schools indicate that increased use of the target school site would have beneficial consequences. Over half (56 percent) of target school liaisons anticipate that increased use of both the college campus and the target school would positively influence participating students' performance. This finding suggests that at least half of the target schools favor an overall increase in the intensity of Upward Bound services, regardless of whether these services are provided at the college campus or at the target school.

2. Changes in Upward Bound Recruitment and Admissions Policies

Large majorities of target school liaisons believe that positive effects would from arise from changing Upward Bound recruitment and admissions policies. Nine-tenths of liaisons indicate that an increase in the number of students served by Upward Bound would have a positive effect (Table IV.2). A similar share of liaisons anticipates benefits arising if more students are made aware of the Upward Bound program. About three-fourths of liaisons expect that participating students would benefit if they were given larger stipends to reduce their need for summer and after-school employment, and a similar proportion of liaisons indicates that Upward Bound participants would benefit if students were recruited from lower grades, and if eligibility requirements were broadened so more students were eligible for the program. In contrast, only one-fifth (22 percent) of liaisons indicate that a positive effect would arise from tightening eligibility requirements to concentrate services on students with the greatest needs; almost half (46 percent) of liaisons claim that this change would negatively affect students.

E. CONCLUSIONS

This chapter examined target school perceptions of Upward Bound and ways it might be improved. Issues considered included the schools' overall view of Upward Bound, the target school liaisons' perceptions of Upward Bound's effects on participants and schools, and possible changes to improve the effectiveness of the program. In general, we found that target schools liaisons have a favorable impression of Upward Bound. Upward Bound is generally seen as having a positive effect on participants, particularly in terms of their academic performance. However, the reported spillover effects of Upward Bound on the target school are usually minor. Upward Bound is more likely to have reported effects on the attitudes and actions of parents and teachers than on the actual educational policies adopted by target school administrators. Finally, almost all target school liaisons believe that Upward Bound would be improved by increasing parental involvement in the program and by expanding the program to serve more eligible students.

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APPENDIX A

APPENDIX A

A. About the Sample

To obtain our sample of target schools, we first asked each Upward Bound project in our effectiveness study to identify schools from which they recruited or selected students within the past three years (1990-1993). Note that our definition of target schools emphasizes where students are at the time of recruitment or selection, and not the schools that they attend when participating in Upward Bound. As a result, the sample includes middle schools which students attended if they were recruited in eighth grade and from which they would have just graduated before starting Upward Bound. Through this process, we identified 626 target schools. A supplemental sample of 128 schools that should have been included in the original sample was later added, yielding a total of 754 schools to be surveyed.

The original study design called for limiting the sample to the schools identified by the Upward Bound projects in the effectiveness study as described above. However, we found that a number of projects in the effectiveness study were recruiting students from schools which they had not previously listed as target schools. Compared with our initial sample, these omitted schools disproportionately included middle and junior high schools. We hypothesized that projects may have failed to list these schools because their relationship with these schools may be limited to recruiting. Because these schools should be included according to the definition of the sample, we opted to supplement the original sample. This supplement of 128 schools actually included 104 schools which were identified through the effectiveness study as described above, 22 schools which were not originally surveyed because their projects dropped out of the effectiveness study, and 2 schools which were not surveyed due to a clerical error.

B. The Questionnaire

The survey form consisted of a two-part questionnaire. The school principal completed one part of the questionnaire and the Upward Bound liaison--a school staff member identified by the Upward Bound project--completed the second part of the form. We asked school principals to report on school climate and demographics. Upward Bound liaisons reported on the type of Upward Bound-related activities that target school staff were engaged in, the intensity of the interactions between target school and Upward Bound staff, and their perceptions of the program's effectiveness. Surveys were mailed to the initial sample of 626 target schools in 1993 and to the supplemental sample of 128 schools in 1994. Differences in the first and second wave survey forms were minor and predominately reflected changes in dates arising from the different year when the surveys were mailed. The response rates for both mailings of the survey were high: we received at least one of the two survey parts from 98 percent of the initial sample and 90 percent of the supplemental sample. The overall response rate for both mailings was 96 percent. In our analysis, we combined data from both waves.

OMB No.: 1875-0089

Expires: September 30, 1995

HORIZONS

The National Study of Upward Bound

SURVEY OF UPWARD BOUND TARGET SCHOOLS

PART I

(To be completed by this school's designated Upward Bound liaison. The designated Upward Bound liaison may be the school principal. If there is no designated liaison, PART I should be completed by a person very familiar with the Upward Bound program at this school.)

U.S. Department of Education
Washington, DC

The United States Department of Education is concerned with protecting the privacy of individuals who participate in voluntary surveys. Your responses will be combined with those of other Upward Bound grantees, and the answers you give will never be identified as yours. This survey is authorized by law (20 U.S.C. 1221e.1). You may skip questions you do not want to answer, however, we hope you will answer as many as you can.

Conducted by:

Mathematica Policy Research, Inc.
Princeton, NJ

RETURN INSTRUCTIONS

When you have completed this questionnaire, please return it in the postage paid envelope to:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393

Attention: Ed Freeland

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SECTION A: SCHOOL AND STUDENT CHARACTERISTICS

A1. Has this school had students selected for the Upward Bound program at any time in the past 3 years?

01 ☐ Yes ➡ Please complete this questionnaire and return it in the enclosed envelope.

00 ☐ No ➡ Please complete questions A2-A7. Then return this questionnaire in the enclosed envelope.

A2. In what type of area is this school located?

MARK ONE

01 ☐ Rural

02 ☐ Suburban community

03 ☐ Small city

04 ☐ Medium-sized city

05 ☐ Large city or metropolitan area

A3. As of October 1, 1992 (or the most recent date for which data are available), what was this school's student enrollment?

Student Enrollment as of:

|__|__| 19 |__|__|
Month Year

Total Enrollment: |__|__|__|__|__|

A4. What grades does this school serve?

MARK ALL THAT APPLY

01 ☐ Pre-K through 4th grade

02 ☐ 5th and 6th grade

03 ☐ 7th grade

04 ☐ 8th grade

05 ☐ 9th grade

06 ☐ 10th grade

07 ☐ 11th grade

08 ☐ 12th grade

A5. As of October 1, 1992 (or the most recent date for which data are available), what percentage of the students in this school were in the following groups?

- IF THIS SCHOOL DOES NOT HAVE STUDENTS IN A GROUP, RECORD 0 ON THE LINE. PERCENTAGES SHOULD SUM TO 100%.

PERCENT

______% Black (non-Hispanic)

______% White (non-Hispanic)

______% Asian or Pacific Islander

______% American Indian or Alaskan Native

______% Hispanic

100% TOTAL

A6. To the best of your knowledge, about what percentage of the entire 1991-1992 graduating class is now enrolled in a...

- YOUR BEST ESTIMATES ARE FINE.

a. 2-year community or junior college . . . . _______%

b. 4-year college or university . . . . _______%

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A7. Please mark the characteristics that best describe this school.

MARK ALL THAT APPLY

01 ☐ Comprehensive public school (not including magnet school or school of choice)
02 ☐ Public school with special curricular focus, e.g. Fine Arts, Business, Science (not including magnet school)
03 ☐ Public magnet school (including schools with magnet programs, schools within a school)
04 ☐ Public school of choice (open enrollment/ non-specialized curriculum)
05 ☐ Year-round school
06 ☐ Technical or vocational school
07 ☐ Catholic religious affiliation
08 ☐ Other religious affiliation
09 ☐ Private school, no religious affiliation
10 ☐ Boarding school
11 ☐ Indian reservation school
12 ☐ Military academy
13 ☐ Other (Specify: ______________________________)

A8. Which of these science, mathematics and computer courses are offered at this school?

MARK ALL THAT APPLY

Science

01 ☐ General Science
02 ☐ Life Science
03 ☐ Earth Science
04 ☐ Physical Science
05 ☐ Biology
06 ☐ Chemistry
07 ☐ Physics
08 ☐ Astronomy
09 ☐ Other *(Specify)*: ______________

Mathematics

21 ☐ Pre-Algebra
22 ☐ Algebra I
23 ☐ Algebra II
24 ☐ Geometry
25 ☐ Trigonometry
26 ☐ Pre-Calculus
27 ☐ Calculus
28 ☐ Other *(Specify)*: ______________

Computers

31 ☐ Computer Programming
32 ☐ Computer Applications/Software Use
33 ☐ Other *(Specify)*: ______________

A9. Do you have language minority/limited-English-proficient (LM/LEP) students enrolled in this school?

NOTE:

- DO NOT INCLUDE EXCHANGE STUDENTS.
- LANGUAGE MINORITY (LM) STUDENTS RANGE FROM STUDENTS WITH NO ENGLISH-SPEAKING PROFICIENCY TO BEING FULLY ENGLISH-PROFICIENT. FOR LM STUDENTS A NON-ENGLISH LANGUAGE IS TYPICALLY SPOKEN IN THEIR HOMES.
- A LIMITED-ENGLISH-PROFICIENT (LEP) STUDENT IS AN LM STUDENT IN THE LOWER ENGLISH PROFICIENCY RANGES, FROM NO ENGLISH PROFICIENCY TO LIMITED PROFICIENCY. THE NATIVE LANGUAGE OF LEP STUDENTS IS ONE OTHER THAN ENGLISH AND THEIR SKILLS IN LISTENING, SPEAKING, READING, OR WRITING ENGLISH ARE SUCH THAT THEY DERIVE LITTLE BENEFIT FROM SCHOOL INSTRUCTION DELIVERED IN ENGLISH.

01 ☐ Yes ➡ **GO TO A10**

00 ☐ No ➡ **SKIP TO SECTION B** (PAGE 3)

A10. Excluding exchange students, what percentage of the student body is LM/LEP?

________%

SECTION B: UPWARD BOUND PROJECT

This section should be completed by the Upward Bound liaison. If there is no designated liaison, a person who is very familiar with the Upward Bound program at this school should complete this section.

I. HISTORY OF UPWARD BOUND INVOLVEMENT AT THIS SCHOOL

B1. How many Upward Bound Projects has this school worked with during the past 3 years?

01 ☐ Just one Upward Bound Project → **GO TO B2**

02 ☐ More than one Upward Bound Project

SPECIAL INSTRUCTIONS

- Most Section B questions ask about Upward Bound participation in general. For a few project-specific questions (B13, B16-B18) we need information about each of the Upward Bound projects (i.e., projects sponsored by different institutions or organizations) this school has worked with during the past 3 years.
- Answering Project-Specific Questions. Record the name of the project in the space provided.

B2. In what year did this school first become an Upward Bound target school?

19 |__|__|
YEAR

B3. Did this school approach the Upward Bound program for information about serving as a target school or was this school recruited by the Upward Bound program?

MARK ONE

01 ☐ School approached Upward Bound

02 ☐ Upward Bound recruited school

-1 ☐ Don't know

B4. Has this school had students selected for Upward Bound every year since becoming a target school?

01 ☐ Yes → **SKIP TO B7**

00 ☐ No → **GO TO B5**

B5. In which of these years did this school most recently have students selected for Upward Bound?

MARK ONE

01 ☐ 1992-93 school year

02 ☐ 1991-92 school year

03 ☐ 1990-91 school year

B6. Compared to 3 years ago, would you say the number of students selected from this school for Upward Bound has . . .

MARK ONE

01 ☐ Stayed the same

02 ☐ Increased

03 ☐ Decreased

-1 ☐ Don't Know

B7. How many students from this school are currently participating in Upward Bound?

|__|__|__| NUMBER OF STUDENTS

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II. UPWARD BOUND PROGRAM OPERATIONS

B8. In the most recent year that students in this school were selected for Upward Bound, roughly what percent of the students who applied were selected? (Do not include those placed on a waiting list.)

MARK ONE

- 01 ☐ Less than 25 percent
- 02 ☐ 25-50 percent
- 03 ☐ 51-75 percent
- 04 ☐ More than 75 percent
- -1 ☐ Don't know

B9. In the most recent year that students in this school were selected for Upward Bound, roughly what percent of the students selected chose not to participate?

MARK ONE

- 01 ☐ Less than 25 percent
- 02 ☐ 25-50 percent
- 03 ☐ 51-75 percent
- 04 ☐ More than 75 percent
- -1 ☐ Don't know

B10. Are there students in this school who meet the eligibility requirements of your Upward Bound project(s) who are not currently being served by Upward Bound or any other precollegiate program?

- 01 ☐ Yes → GO TO B11
- 00 ☐ No → SKIP TO B13 (PAGE 5)
- -1 ☐ Don't know → SKIP TO B13 (PAGE 5)

B11. How many students do you estimate are eligible for your Upward Bound project(s) but are not currently participating in Upward Bound or any other precollegiate program?

MARK ONE

- 01 ☐ Less than 10 students
- 02 ☐ Between 10 and 25 students
- 03 ☐ Between 26 and 50 students
- 04 ☐ Between 51 and 100 students
- 05 ☐ More than 100 students

B12. How important is each of these factors for explaining why eligible students do not participate in Upward Bound?

MARK ONE BOX FOR EACH FACTOR

	Not a Factor	Minor Factor	Moderate Factor	Major Factor
a. Not enough eligible students are aware of the program	00 ☐	01 ☐	02 ☐	03 ☐
b. Eligible students do not apply	00 ☐	01 ☐	02 ☐	03 ☐
c. Eligible students apply but are not accepted	00 ☐	01 ☐	02 ☐	03 ☐
d. Eligible students who are accepted choose not to participate	00 ☐	01 ☐	02 ☐	03 ☐
e. Eligible students are served by other precollegiate programs designed to improve access to higher education	00 ☐	01 ☐	02 ☐	03 ☐
f. Other (Specify):____________________ ____________________________	00 ☐	01 ☐	02 ☐	03 ☐

B13. In the most recent year that this school had students selected for Upward Bound, was this school used as a site for any of the following Upward Bound services? If yes, please indicate when the service was offered.

- PLEASE RECORD THE NAME OF EACH UPWARD BOUND PROJECT THIS SCHOOL HAS WORKED WITH IN THE PAST 3 YEARS.

	USED AS SITE?			WHEN OFFERED? (Mark All That Apply)			
	No	Yes		During School	After School	Evenings	Weekends
1. ______ (Name of Upward Bound Project)							
a. Academic instruction	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
b. Tutoring	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
c. Other Upward Bound Services or Courses	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
2. ______ (Name of Upward Bound Project)							
a. Academic instruction	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
b. Tutoring	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
c. Other Upward Bound Services or Courses	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
3. ______ (Name of Upward Bound Project)							
a. Academic instruction	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
b. Tutoring	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐
c. Other Upward Bound Services or Courses	00 ☐	01 ☐	→	01 ☐	02 ☐	03 ☐	04 ☐

III. SCHOOL STAFF AND THE UPWARD BOUND PROGRAM

B14. In general, how many of the faculty at this school are familiar with the Upward Bound program?

MARK ONE

01 ☐ 75% to 100%

02 ☐ 50% to 75%

03 ☐ 25% to 50%

04 ☐ Less than 25%

B15. Among those faculty who are familiar with the Upward Bound program, what is their general attitude toward the program?

MARK ONE

01 ☐ Very favorable

02 ☐ Somewhat favorable

03 ☐ Neither favorable nor unfavorable

04 ☐ Somewhat unfavorable

05 ☐ Very unfavorable

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To answer questions, B16-B18, write the name of each Upward bound project this school has worked with at any time during the past 3 years in the space below. Then answer B16-B18 for each Upward Bound project.

	1. Name of Upward Bound Project: ______	2. Name of Upward Bound Project: ______	3. Name of Upward Bound Project: ______
B16. How often do you or other staff at this school meet or speak on the telephone with Upward Bound staff?	**MARK ONE** 01 ☐ At least once a week 02 ☐ 1-3 times a month 03 ☐ 4-6 times a year 04 ☐ 1-3 times a year 05 ☐ Less than once a year	**MARK ONE** 01 ☐ At least once a week 02 ☐ 1-3 times a month 03 ☐ 4-6 times a year 04 ☐ 1-3 times a year 05 ☐ Less than once a year	**MARK ONE** 01 ☐ At least once a week 02 ☐ 1-3 times a month 03 ☐ 4-6 times a year 04 ☐ 1-3 times a year 05 ☐ Less than once a year
B17. Currently, who from this school is mainly responsible for helping recruit students for Upward Bound?	**MARK ONE** 01 ☐ School Principal 02 ☐ Vice Principal 03 ☐ Guidance Counselors 04 ☐ Teachers 05 ☐ Other *(Specify):* ______ -4 ☐ Not applicable; staff not involved in Upward Bound recruiting	**MARK ONE** 01 ☐ School Principal 02 ☐ Vice Principal 03 ☐ Guidance Counselors 04 ☐ Teachers 05 ☐ Other *(Specify):* ______ -4 ☐ Not applicable; staff not involved in Upward Bound recruiting	**MARK ONE** 01 ☐ School Principal 02 ☐ Vice Principal 03 ☐ Guidance Counselors 04 ☐ Teachers 05 ☐ Other *(Specify):* ______ -4 ☐ Not applicable; staff not involved in Upward Bound recruiting
B18. In which of these Upward Bound activities did staff at this school participate during the most recent year that this school had students selected for Upward Bound?	**MARK ALL THAT APPLY** **Recruiting/Screening Students** 01 ☐ Personally recruited students 02 ☐ Nominated candidates 03 ☐ Wrote letters of recommendation 04 ☐ Reviewed student qualifications 05 ☐ Other recruiting/ screening activity *(Specify):* ______ **Other Upward Bound Activities** 06 ☐ Participated in Upward Bound workshops for target school staff 07 ☐ Visited Upward Bound class(es) 08 ☐ Visited Upward Bound project office 09 ☐ Worked as an Upward Bound instructor or tutor 10 ☐ Other activity *(Specify):* ______ 11 ☐ **NO STAFF FROM THIS SCHOOL PARTICIPATED IN ANY ACTIVITIES**	**MARK ALL THAT APPLY** **Recruiting/Screening Students** 01 ☐ Personally recruited students 02 ☐ Nominated candidates 03 ☐ Wrote letters of recommendation 04 ☐ Reviewed student qualifications 05 ☐ Other recruiting/ screening activity *(Specify):* ______ **Other Upward Bound Activities** 06 ☐ Participated in Upward Bound workshops for target school staff 07 ☐ Visited Upward Bound class(es) 08 ☐ Visited Upward Bound project office 09 ☐ Worked as an Upward Bound instructor or tutor 10 ☐ Other activity *(Specify):* ______ 11 ☐ **NO STAFF FROM THIS SCHOOL PARTICIPATED IN ANY ACTIVITIES**	**MARK ALL THAT APPLY** **Recruiting/Screening Students** 01 ☐ Personally recruited students 02 ☐ Nominated candidates 03 ☐ Wrote letters of recommendation 04 ☐ Reviewed student qualifications 05 ☐ Other recruiting/ screening activity *(Specify):* ______ **Other Upward Bound Activities** 06 ☐ Participated in Upward Bound workshops for target school staff 07 ☐ Visited Upward Bound class(es) 08 ☐ Visited Upward Bound project office 09 ☐ Worked as an Upward Bound instructor or tutor 10 ☐ Other activity *(Specify):* ______ 11 ☐ **NO STAFF FROM THIS SCHOOL PARTICIPATED IN ANY ACTIVITIES**

B19. **During the most recent year that this school had students selected for Upward Bound, did staff from this school participate with staff from other target schools in Upward Bound activities such as recruitment, workshops, or field trips?**

01 ☐ Yes

00 ☐ No

-1 ☐ Don't know

B20a. **To what extent during the past 3 years have staff at this school been called upon to help plan Upward Bound activities in the area of academic curriculum?**

MARK ONE

00 ☐ Not called upon at all

01 ☐ Minimal involvement (e.g., informal consultation)

02 ☐ Moderate involvement (e.g., planning, meetings)

03 ☐ Joint discussion and decision making

B20b. **To what extent during the past 3 years have staff at this school been called upon to help plan Upward Bound activities in the area of non-academic services?**

MARK ONE

00 ☐ Not called upon at all

01 ☐ Minimal involvement (e.g., informal consultation)

02 ☐ Moderate involvement (e.g., planning, meetings)

03 ☐ Joint discussion and decision making

IV. UPWARD BOUND AND OTHER PRECOLLEGIATE PROGRAMS

The next few questions are about precollegiate programs other than Upward Bound that this school may have. Precollegiate programs are defined in this survey as programs specially designed to increase the access of disadvantaged students to higher education. They include both summer and year-round programs that might be targeted toward elementary or secondary school students. They may or may not include college-level instruction, but they are intended to prepare and motivate students for college.

B21. **Does this school have any students currently participating in . . .**

- IF YES: PLEASE INDICATE THE NUMBER OF STUDENTS CURRENTLY PARTICIPATING.

	No	Yes	Number of Students
a. Talent Search	☐ 00	☐ 01 ➡	________
b. I Have a Dream (IHAD) . .	☐ 00	☐ 01 ➡	________
c. Career Beginnings	☐ 00	☐ 01 ➡	________
d. Another Precollegiate Program *(Specify)*: ____________________ .	☐ 00	☐ 01 ➡	________
e. Another Precollegiate Program *(Specify)*: ____________________ .	☐ 00	☐ 01 ➡	________

IF THIS SCHOOL HAS NO PRECOLLEGIATE PROGRAMS (EXCEPT UPWARD BOUND), PLEASE SKIP TO QUESTION B26, PAGE 9.

B22. **In general, are Upward Bound participants encouraged to participate in other precollegiate programs?**

MARK ONE

01 ☐ No, not allowed → **SKIP TO B26 (PAGE 9)**

00 ☐ No, not encouraged

02 ☐ Yes, encouraged

03 ☐ Neither encouraged nor discouraged

-1 ☐ Don't Know

→ **GO TO B23**

B23. **Refer back to the programs listed in question B21. Mark the program from B21 that currently has the largest number of participating students from this school.**

MARK ONE

01 ☐ a. [Talent Search]

02 ☐ b. [I Have a Dream (IHAD)]

03 ☐ c. [Career Beginnings]

04 ☐ d. [Another Precollegiate Program]

06 ☐ e. [Another Precollegiate Program]

PLEASE ANSWER QUESTIONS B24-B25 FOR THE PRECOLLEGIATE PROGRAM WITH THE LARGEST NUMBER OF PARTICIPATING STUDENTS.

B24. **Which of these statements BEST describes the students who are served by this program at this school?**

MARK ONE

01 ☐ All students in all grades

02 ☐ All students in certain grades

03 ☐ Selected students in all grades

04 ☐ Selected students in certain grades

B25. **How similar are the students selected in this school for this program to those students who are selected for Upward Bound on each of the following characteristics?**

MARK ONE ON EACH LINE

	Very Similar	Somewhat Somewhat	Not at All Similar	Don't Know
a. Race or ethnicity	01 ☐	02 ☐	03 ☐	-1 ☐
b. The proportion of male and female students	01 ☐	02 ☐	03 ☐	-1 ☐
c. Grade point average	01 ☐	02 ☐	03 ☐	-1 ☐
d. Motivation to go to college	01 ☐	02 ☐	03 ☐	-1 ☐
e. Chances of graduating	01 ☐	02 ☐	03 ☐	-1 ☐

V. PARTICIPATING IN UPWARD BOUND

B26. This question is about the overall influence of Upward Bound on this school. In general, how much has participating in Upward Bound influenced this school's . . .

MARK ONE BOX FOR EACH AREA

	No Influence	Minor Influence	Moderate Influence	Major Influence
a. Curriculum	00 ☐	01 ☐	02 ☐	03 ☐
b. Instructional strategies	00 ☐	01 ☐	02 ☐	03 ☐
c. Staff development	00 ☐	01 ☐	02 ☐	03 ☐
d. Staff's expectations of students . .	00 ☐	01 ☐	02 ☐	03 ☐
e. Parental involvement	00 ☐	01 ☐	02 ☐	03 ☐
f. School restructuring or school reform	00 ☐	01 ☐	02 ☐	03 ☐

B27. How much impact does participating in Upward Bound have on these high school experiences of the average Upward Bound participant?

MARK ONE BOX FOR EACH ACTIVITY

	Some Negative Impact	Neither a Negative nor Positive Impact	Some Positive Impact	Don't Know
a. Class attendance	01 ☐	02 ☐	03 ☐	-1 ☐
b. Participation in classroom discussion	01 ☐	02 ☐	03 ☐	-1 ☐
c. Completion of homework assignments	01 ☐	02 ☐	03 ☐	-1 ☐
d. Grades on report cards	01 ☐	02 ☐	03 ☐	-1 ☐
e. Participation in sports activities	01 ☐	02 ☐	03 ☐	-1 ☐
f. Participation in extracurricular activities other than sports	01 ☐	02 ☐	03 ☐	-1 ☐
g. Seeking help from teachers or school staff	01 ☐	02 ☐	03 ☐	-1 ☐
h. Seeking and receiving peer support	01 ☐	02 ☐	03 ☐	-1 ☐
i. Attention from teachers and guidance counselors	01 ☐	02 ☐	03 ☐	-1 ☐
j. Participation in leadership roles	01 ☐	02 ☐	03 ☐	-1 ☐
k. Taking college preparatory courses	01 ☐	02 ☐	03 ☐	-1 ☐
l. Taking college Advanced Placement courses or exams	01 ☐	02 ☐	03 ☐	-1 ☐

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B28. How can Upward Bound be improved? For each of the suggested changes, please indicate the type of impact you think this change might have on the students who participate in Upward Bound from this school.

MARK ONE BOX FOR EACH ACTIVITY

	Some Negative Impact	Neither a Negative nor Positive Impact	Some Positive Impact	Don't Know
a. Increasing the number of students Upward Bound serves	01 ☐	02 ☐	03 ☐	1 ☐
b. Recruiting students from lower grades	01 ☐	02 ☐	03 ☐	1 ☐
c. Making more students aware of the program	01 ☐	02 ☐	03 ☐	1 ☐
d. Broadening the eligibility requirements used by the Upward Bound program so that more students are eligible	01 ☐	02 ☐	03 ☐	1 ☐
e. Tightening the Upward Bound eligibility requirements so that the program can concentrate on students with the greatest needs	01 ☐	02 ☐	03 ☐	1 ☐
f. Involving more faculty from this school in the program	01 ☐	02 ☐	03 ☐	1 ☐
g. Giving students larger stipends to reduce their need for summer and after-school employment	01 ☐	02 ☐	03 ☐	1 ☐
h. Encouraging parents to participate more	01 ☐	02 ☐	03 ☐	1 ☐
i. Increasing use of this school as a site for Upward Bound services	01 ☐	02 ☐	03 ☐	1 ☐
j. Increasing use of the college campus as a site for Upward Bound services	01 ☐	02 ☐	03 ☐	1 ☐

B29. Does this school have at least one person who is a designated Upward Bound liaison?

01 ☐ Yes ➡ GO TO B30
00 ☐ No ➡ SKIP TO B32

B30. Did an Upward Bound liaison complete most or all of Section B?

01 ☐ Yes ➡ GO TO B31
00 ☐ No ➡ SKIP TO B32

B31. For how many years have you (or this person) served as an Upward Bound liaison?

|__|__| Years
00 ☐ Less than one year

B32. In case we need to clarify some of the information that has been given, it would be very helpful if you would provide the name and title of the person who completed most or all of Sections A and B.

PLEASE PRINT

NAME: ______________________________

____

TITLE:

01 ☐ Principal
02 ☐ Vice Principal
03 ☐ Guidance Counselor
04 ☐ Teacher
05 ☐ Other *(Specify)*

____

THANK YOU FOR YOUR ASSISTANCE. PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED POSTAGE PAID ENVELOPE TO:
Mathematica Policy Research
P.O. Box 2393
Princeton, NJ 08543-2393
Attention: Ed Freeland

[illegible]ICA
[illegible] Inc.

OMB No.: 1875-0089

Expires: September 30, 1995

HORIZONS

The National Study of Upward Bound

SURVEY OF UPWARD BOUND TARGET SCHOOLS

PART II

(To be completed by the school principal.)

U.S. Department of Education
Washington, DC

The United States Department of Education is concerned with protecting the privacy of individuals who participate in voluntary surveys. Your responses will be combined with those of other Upward Bound grantees, and the answers you give will never be identified as yours. This survey is authorized by law (20 U.S.C. 1221e.1). You may skip questions you do not want to answer, however, we hope you will answer as many as you can.

Conducted by:

Mathematica Policy Research, Inc.
Princeton, NJ

RETURN INSTRUCTIONS

When you have completed this questionnaire, please return it in the postage paid envelope to:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393

Attention: Ed Freeland

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PART II: OTHER SCHOOL CHARACTERISTICS

This section should be completed by the school principal.

C1. How many full- and part-time teachers and aides are currently working at this school.

_________ Number of **full-time** teachers

_________ Number of **part-time** teachers

_________ Number of **full-time** aides

_________ Number of **part-time** aides

C2. How many of these full-time teachers hold regular or standard state certification in their fields of assignment?

- COUNT A TEACHER AS CERTIFIED IF HE/SHE HAS MET YOUR STATE'S REGULAR OR STANDARD CERTIFICATION REQUIREMENTS IN HIS/HER ASSIGNED FIELD.
- INCLUDE THOSE WHO HAVE COMPLETED ALL NECESSARY COURSE WORK AND PRACTICE TEACHING, AND ARE ELIGIBLE FOR FULL CERTIFICATION UPON COMPLETION OF A PROBATIONARY PERIOD.
- DO NOT COUNT TEACHERS WHO HAVE ONLY EMERGENCY OR OTHER NONSTANDARD CERTIFICATION.

_________ Number of full-time teachers certified in their field of assignment

C3. Does this school offer Advanced Placement courses?

01 ☐ Yes ⇒ **GO TO C4**

00 ☐ No ⇒ **SKIP TO C5**

C4. In which of the following subject areas does this school offer Advanced Placement courses?

MARK ALL THAT APPLY

01 ☐ Science

02 ☐ Mathematics

03 ☐ English

04 ☐ History

05 ☐ Foreign languages

06 ☐ Other (Specify): _________________

07 ☐ Other (Specify): _________________

C5. On a typical day, what percentage of this school's regular classroom teachers are absent?

- INCLUDE ABSENCES BECAUSE OF ILLNESS AS WELL AS PERSONAL DAYS WHEN ESTIMATING THIS PERCENTAGE.

_________ %

C6. How many full-time equivalent (FTE) guidance counselors does this school have?

_________ Number of Counselors

C7. How many full-time equivalent (FTE) guidance counselors provide college counseling?

_________ Number of Counselors

C8. What percentage of the students currently enrolled in this school qualify for free or reduced price lunches?

PERCENT

______% Qualify for **free** lunch

______% Qualify for **reduced price** lunch, but not free lunch

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C9. On a scale of 1 to 5, where 1 means "no emphasis" and 5 means "a major emphasis," how much emphasis does each of the following receive in this school?

CIRCLE ONE NUMBER ON EACH LINE

	No Emphasis		Minor Emphasis		Major Emphasis
a. Giving the staff responsibility for analyzing and solving school problems	1	2	3	4	5
b. Establishing a stable staff by reducing faculty transfers	1	2	3	4	5
c. Changing curriculum (e.g., increasing academic course requirements)	1	2	3	4	5
d. Staff development activities	1	2	3	4	5
e. Promoting parental support and involvement	1	2	3	4	5
f. Publicizing and honoring academic achievement	1	2	3	4	5
g. Promoting student participation in team and extracurricular activities	1	2	3	4	5
h. Monitoring student academic progress	1	2	3	4	5

C10. On a scale of 1 to 5, where 1 means "not at all accurate" and 5 means "very accurate," how accurately do each of these characteristics describe this school's climate?

CIRCLE ONE NUMBER ON EACH LINE

	Not Accurate At All		Somewhat Accurate		Very Accurate
a. Discipline is emphasized at this school	1	2	3	4	5
b. Students place a high priority on learning	1	2	3	4	5
c. Classroom activities are highly structured	1	2	3	4	5
d. Teachers at this school press students to achieve academically	1	2	3	4	5
e. Students are expected to do homework	1	2	3	4	5
f. Teacher morale is high	1	2	3	4	5
g. Student morale is high	1	2	3	4	5
h. This school emphasizes sports	1	2	3	4	5
i. Students are encouraged to compete for grades	1	2	3	4	5
j. Counselors and teachers encourage students to enroll in academic classes	1	2	3	4	5
k. Teachers have a negative attitude about students	1	2	3	4	5
l. Teachers find it difficult to motivate students	1	2	3	4	5
m. There is conflict between teachers and administrators	1	2	3	4	5

PLEASE TURN TO THE BACK COVER.

C11. On a scale of 1 to 4, where 1 means "not a problem" and 4 means "a serious problem," to what degree is each of the following a problem with students in this school?

CIRCLE ONE NUMBER ON EACH LINE

	Not a Problem	Minor Problem	Moderate Problem	Serious Problem
a. Student tardiness	1	2	3	4
b. Student absenteeism	1	2	3	4
c. Class cutting	1	2	3	4
d. Physical conflicts among students	1	2	3	4
e. Gang activity	1	2	3	4
f. Teen pregnancy	1	2	3	4
g. Robbery or theft	1	2	3	4
h. Vandalism	1	2	3	4
i. Use of alcohol	1	2	3	4
j. Use of illegal drugs	1	2	3	4
k. Possession of weapons	1	2	3	4
l. Physical abuse of teachers	1	2	3	4
m. Verbal abuse of teachers	1	2	3	4
n. Racial/ethnic conflict among students	1	2	3	4

Thank you very much for your assistance. Please return this questionnaire to Mathematica Policy Research in the enclosed envelope. The postage has been prepaid. If you have lost the envelope, the address is:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393

Attention: Edward Freeland

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APPENDIX B

TABLE B.1

KEY VARIABLES FROM THE SURVEY OF TARGET SCHOOLS BY GRADE LEVEL OF SCHOOL

	High School	Middle School	Total
Grade level of target schools	79%	21%	100%
Number of Upward Bound participants at:			
25th percentile	4	0	3
50th percentile (median)	8	3	8
75th percentile	14	8	14
mean	12.3	7.2	11.6
Upward Bound participants as percent of total enrollment			
25th percentile	.5%	.1%	.4%
50th percentile (median)	1.0	.4	.9
75th percentile	2.0	1.0	1.8
Type of school:			
Comprehensive public school	64%	77%	67%
Public school with special emphasis	15	3	12
Public magnet school	19	11	17
Public school of choice	25	15	23
Year-round school	1	0	1
Technical or vocational school	5	0	4
Private of parochial school	4	2	4
Indian reservation school	3	0	2
Military academy	0	0	0
Other	2	6	2
Number of alternative precollege programs in school			
0	31%	25%	31%
1	46	54	47
2	16	15	16
3+	7	6	6
Target school Upward Bound roles:			
Target school recruits only	27%	41%	31%
Target school used as a site for service	54	28	50

	High School	Middle School	Total
Ideal scale of target school staff involvement (denominator excludes target schools that fail to meet scale sequence):			
	7%	11%	8%
1. No activity	42	67	47
2. Recruit only	11	5	10
3. "2" + workshops and visits	24	8	20
4. "3" + planning	16	9	15
5. "4" + instructor			
Median number of students in alternative precollege programs	59	40	56
Median number of students in largest alternative precollege program	51	32	47
Percent of target school served by largest alternative precollege program	15%	4%	13%
Ratio of largest precollege program size to Upward Bound size	6.8	6.8	6.8
Percent of target schools with:			
Talent Search	54%	67%	57%
I Have a Dream	3	5	4
Career Beginnings	3	2	3
Other Program #1	30	26	30
Other Program #2	11	4	10
Median number of target school students participating in:			
Talent Search	29	16	26
I Have a Dream	5	15	6
Career Beginnings	12	3	10
Other Program #1	14	14	14
Other Program #2	13	1	10
Percent of schools where largest precollege program is:			
Upward Bound	46%	28%	43%
Talent Search	37	55	40
Other Program #1	12	12	12
Other Program #2	3	2	3
IHAD/Career Beginnings	2	2	2
Schools with eligible non-participants	95%	97%	95%
Number of eligible non-participants			
<10	9%	11%	10%
10-25	24	26	24
26-50	25	23	24
51-100	16	18	16
>100	27	22	26

	High School	Middle School	Total
Course offerings			
Algebra I	100%	84%	97%
Algebra II	99	14	83
Geometry	98	34	85
Trigonometry	83	0	66
Pre-Calculus	65	0	52
Calculus	70	0	56
Biology	100	8	82
Chemistry	99	0	79
Physics	95	0	77
Computer programming	68	28	60
Target school offers at least one Advanced Placement course	73	33	64
Target school faculty familiar with Upward Bound program:			
0-25%	26%	33%	28%
25-50	7	10	16
51-75	27	22	26
75+	30	36	31
Target school faculty attitude toward Upward Bound			
Very favorable	58%	66%	60%
Somewhat favorable	24	22	24
Neither favorable/unfavorable	13	11	13
Somewhat unfavorable	2	2	2
Very unfavorable	2	0	2
Target school faculty involvement in academic planning			
Not called upon	51%	70%	55%
Minimal involvement	34	23	32
Moderate involvement	10	7	10
Joint discussion	5	0	4
Target school faculty involvement in nonacademic planning			
Not called upon	57%	72%	60%
Minimal involvement	31	20	29
Moderate involvement	7	8	7
Joint discussion	6	0	5
Target school staff involvement in Upward Bound:			
Any recruiting	95%	94%	94%
Any workshop	18	10	17
Any visit to Upward Bound	32	15	29
Any work as Upward Bound instructor	26	15	24
Staff helped with academic curriculum	49	30	45
Staff helped with non-academic services	43	28	40

	High School	Middle School	Total
Number of Upward Bound activities that involve target school staff:			
0	5%	14%	6%
1	28	50	33
2	16	7	14
3	22	12	20
4	16	9	15
5	10	6	9
6	3	2	3
Schools where Upward Bound uses facilities for:			
Academic instruction	26%	12%	23%
Tutoring	37	17	33
Other services/courses	26	13	24
Any activities	45	17	38
Percent of schools reporting Upward Bound effects on:			
Parental involvement			
Staff expectations of students	60%	47%	58%
Instructional strategies	59	34	54
Curriculum	39	19	35
Staff development	38	18	34
School restructuring and reform	33	15	30
	30	20	29
Percent of target schools reporting some positive effect on participants':			
Academic performance			
Grades on report cards	93%	97%	94%
Completion of homework assignments	93	94	93
Participation in classroom discussion	91	90	91
Class attendance	90	94	90
Participation in classes and activities			
Taking college preparatory classes	91	94	91
Participation in extracurricular activities other than sports	65	58	65
Taking Advanced Placement classes or exams	54	70	56
Participation in sports	40	43	41
Interaction with staff and peers			
Seeking help from teachers or school staff	90	93	91
Attention from teachers or guidance counselors	86	91	86
Seeking and receiving peer support	78	83	79
Participation in leadership roles	77	77	77

	High School	Middle School	Total
Percent of schools suggesting ways for Upward Bound to improve effectiveness:			
Changes in relationship with home and school			
Encouraging parents to participate more	93%	97%	94%
Involving more faculty from the target school in the program	84	91	85
Increased use of the college campus for Upward Bound services	77	89	79
Increased use of the target school as a site for Upward Bound services	71	73	71
Changes in recruitment and admissions policies			
Increasing the number of students served by Upward Bound	92	90	92
Making more students aware of the program	89	92	89
Giving students larger stipends to reduce their need for summer/after-school jobs	77	73	77
Recruiting students from lower grades	78	69	77
Broadening eligibility requirements so more students are eligible	73	76	73
Tightening eligibility requirements to concentrate on students with greatest needs	22	19	22

NOTE: High schools are defined as schools with grade 10 or above, and middle schools are schools with at least grade 8 but no grade higher than 9.

APPENDIX C

APPENDIX TABLE C.1

FACTORS PREDICTING STAFF FAMILIARITY

Measures of Target School Involvement	Estimate[1]	Standard Error[2]	t-Statistic
Staff Involvement	.26	.06	4.31
Served as a Upward Bound Site	.09	.12	.76
Interact with Other Target Schools	.22	.70	1.32

[1] Estimates derived from an ordered probit model.

[2] Standard errors and t-statistics based on the assumption of simple random sampling.

APPENDIX TABLE C.2

ESTIMATES FOR TABLE III.2

INDICATORS OF TARGET SCHOOL INVOLVEMENT AND FAMILIARITY

	Target School Staff Involvement			Use of Target School as a UB Site			Interaction Among Faculty in Different Target Schools			Target School Familiarity with UB Program		
Independent Variable	Estimate[a]	Standard Error[b]	t-value	Estimate[c]	Standard Error	t-value	Estimate[c]	Standard Error	t-value	Estimate[a]	Standard Error	t-value
Target School Characteristics												
Middle and Junior High School	-.22	.19	-1.16	-.92	.23	-4.03	-.80	.31	-2.62	.26	.17	1.55
Rural Location	-.06	.14	-.47	.07	.17	-.39	-.28	.20	-1.42	.17	.15	1.16
Years as a Target School	.04	.01	5.50	.00	.01	.51	.01	.01	1.22	.03	.01	3.79
Total Enrollment	-.00	.00	-1.90	.00	.00	-.98	-.00	-.00	-2.70	-.00	.00	-2.58
Grantee Characteristics												
Number of UB Participants	.02	.00	4.51	.01	.00	2.18	.02	.01	3.20	.01	.00	3.08
4-Year Host Institution	-.69	.20	-3.52	-.68	.25	-2.73	.59	.25	-2.34	.37	.19	1.94
Math/Science Emphasis	.22	.14	1.57	-.54	.17	-3.24	.35	.19	1.84	-.08	.14	-.52
Residential Program	-.23	.24	-.92	.23	.26	.89	-.46	-.25	-1.85	.78	.21	-3.77
Constant	--	--	--	.44	.34	1.32	.28	.35	.78			
N	390			383			358			389		

[a] Estimates derived from an ordered probit model.

[b] Standard errors and t-statistics computed assuming simple random sampling.

[c] Estimates derived from a probit model.

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